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MATERIAL SAFETY DATA SHEET

MSDS # PMC/RC/009/06

Updated on **02-Jan-2006**
Product Name ACCICURE DCS
Revision Number +REV 06
UN Number 3077
CAS No. 4979-32-2

Health Hazard :	1
Fire Hazard :	1
Reactivity :	0
Personal Protection :	X

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

PRODUCT NAME : ACCICURE DCS

Address/Phone No. : PMC Rubber Chemicals India Private Limited
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2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT DESCRIPTION N,N-dicyclohexylbenzothiazole-2-sulphenamide
Also known as: DCBS

HAZARDOUS INGREDIENT(S)	CAS No.	Symbol	R Phrases
N,N-dicyclohexylbenzothiazole-2-sulphenamide (>96 % w/w)	4979-32-2	None	R 53

3. HAZARDS IDENTIFICATION

Low toxicity under normal conditions of handling and use.
In common with many organic compounds in powder form it can produce flammable dust clouds in air.

4. FIRST-AID MEASURES

Inhalation Remove patient from exposure. Obtain medical attention if ill effects occur.

Skin Contact Remove contaminated clothing. Wash skin with soap and water. If symptoms (irritation or blistering) occur obtain medical attention.

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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

Unlikely to be required but if necessary treat symptomatically.

5. FIRE-FIGHTING MEASURES

Requires only routine fire precautions

Protect from sparks (dust explosion risk)

Combustible but not readily ignited. In common with many organic compounds in powder form it can produce flammable dust clouds in air. Combustion or thermal decomposition will evolve very toxic, irritant and extremely flammable vapours. Decomposes at 200°C.

Combustion products: Nitrogen oxides, sulphur oxides, carbon monoxide, carbon dioxide

Extinguishing Media Water spray, foam, dry powder or CO₂. Do not use water jet. (Avoid dust generation.)

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.

Control dust formation. (See 'Fire fighting measures'.)

Collect spillages by mechanical means.

Transfer to a container for disposal or recovery.

7. HANDLING AND STORAGE

7.1 HANDLING

Control dust formation. (See 'Fire fighting measures'.)

Avoid contact with skin and eyes.

Avoid inhalation of high concentrations of dusts. Atmospheric concentrations should be minimised and kept as low as reasonably practicable.

7.2 STORAGE

In common with many organic compounds in powder form it can produce flammable dust clouds in air. Take precautionary measures against static discharges.

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

Suitable containers: High density polyethylene (HDPE) laminated paper bags with polythene liner inside.

Storage Temperature: Ambient.
Storage Life : 6 month(s)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Wear suitable gloves and eye/face protection.

Wear suitable respiratory protective equipment if exposure to high levels of dust are likely.

Occupational Exposure Limits

No occupational exposure limit listed but 6mg/m³ for total dust is recommended

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Powder
Colour	Cream brown to slightly pink
Odour	Almost odourless
Boiling Point (Deg C)	>200
Melting Point (Deg C)	100 (minimum)
Flash Point (Deg C)	180 (closed cup)
Flammable Limits	No data.
Auto Ignition	
Temperature (Deg C)	320° C (Dust).
Explosive Properties	In common with many organic compounds in powder form it can produce flammable dust clouds in air. Minimum ignition energy (MIE) : <3.
Oxidising Properties	No data.
Vapour Pressure (Pascals)	<0.1 at 120 Deg C
Density (g/ml)	1.2 at 20 Deg C
Solubility (Water)	Insoluble
Solubility (Other)	Soluble in Toluene
Partition Coefficient	No data.
Molecular Weight	346.4
Molecular Formula	C19-H26-N2-S2

10. STABILITY AND REACTIVITY

Stable at ambient temperatures.

Incompatible materials: oxidising agents, acids and alkalis.

Hazardous Decomposition Product(s) : See 'Fire fighting measures'.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity LD50 (Rat) >5000mg/kg

Acute Dermal Toxicity LD50 (Rabbit) >5000mg/kg

Inhalation High concentrations of dust may be irritant to the respiratory tract.
Combustion or thermal decomposition will evolve very toxic and irritant vapours.

Skin Contact Non-irritant to rabbit skin. Unlikely to cause skin irritation in man.
It is not a skin sensitiser in animal tests.(guinea-pig).
Unlikely to be hazardous by skin absorption.

Eye Contact Practically non-irritant to rabbit eyes.
Dust may cause irritation.

Ingestion Low oral toxicity.

Long Term Exposure : Ingestion studies in animals have shown that repeated doses produce no significant effects. The substance is not considered to be genotoxic.

Studies in animals have shown that repeated doses produce no carcinogenic effects.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution Solid with low volatility.
The product is sparingly soluble in water.

Persistence and Degradation The product shows no evidence for biodegradability in water.

Toxicity LC50 (zebra fish) (96 hour) (static) 15mg/l.

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Effect on Effluent Treatment

Tests show that the inhibition of aerobic waste water bacteria is unlikely.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, state or national legislation.

14. TRANSPORT INFORMATION

Not Classified as Dangerous for Transport.

DOT Classification :	Not regulated by DOT
IMDG Classification :	Not regulated by IMDG
ICAO Classification :	Not regulated by ICAO

Marine Pollutant : Not classified as a Marine Pollutant

15. REGULATORY INFORMATION

Not Classified as Dangerous for Supply/Use.

EC Classification: Symbols : None

Risk Phrases; 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 : Accelerator for rubber vulcanisation

Generates dichyclohexylamine on hydrolysis.

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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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