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MATERIAL SAFETY DATA SHEET

MSDS # PMC/RC/006/06

Updated on 02-Jan-2006
Product Name ACCICURE HBS
Revision Number +REV04
UN Number 3077
CAS No. 95-33-0

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

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

PRODUCT NAME : ACCICURE HBS

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

PRODUCT DESCRIPTION : N - cyclohexyl-2-benzothiazole sulphenamide

HAZARDOUS INGREDIENT(S)	CAS No.	%(w/w)	Symbol	R&S Phrases
N-cyclohexyl-2-benzo- thiazole sulphenamide	95-33-0	>99	Xi, N	R43, R50/53

3. HAZARDS IDENTIFICATION

Slight irritant to eyes, skin and respiratory tract
May cause sensitisation by skin contact.
Decomposition products may irritate eyes, skin and respiratory tract.
(see; **OTHER INFORMATION**)

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. 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

Combustible but not readily ignited. Flash point 132⁰ C (open cup).
Protect from sparks (dust explosion risk).
Decomposes at 130⁰C to give hydroxylamine.
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. Combustion products: nitrogen oxides, sulphur oxides, carbon monoxide, carbon dioxide.

Extinguishing Media :	Water spray, foam, dry powder or CO ₂ . 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.
Ensure suitable personal protection during removal of spillages.

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 : Cool (air-conditioned)
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 2.5 mg/m³ for total dust is recommended

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Powder/Pellets, non-staining
Colour:	White-cream
Odour:	Almost odourless
pH (Value):	Not applicable.
Boiling Point (Deg C):	Decomposes
Melting Point (Deg C):	101 (minimum)
Flash Point (Deg C):	168 (closed cup) ; 132 (open cup)
Flammable Limits	No data.
Auto Ignition	
Temperature (Deg C)	No data.
Explosive Properties:	In common with many organic compounds in powder form it can produce flammable dust clouds in air.

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Oxidising Properties:	No data.
Vapour Pressure (Pascals):	<1 at 20 Deg C
Solubility (Water):	Insoluble
Solubility (Other):	Soluble in Toluene
Partition Coefficient:	log P n-octanol/water 4.93
Specific Gravity @25°C	1.3
Molecular Weight	264.3
Molecular Formula	C13-H16-N2-S2

10. STABILITY AND REACTIVITY

Stable at ambient temperatures.

Incompatible materials: oxidising agents, acids and alkalis.

Hazardous Decomposition Product(s) : hydrogen sulphide, cyclohexylamine
See ' Fire fighting measures' .

In contact with acids, evolves oxides of sulphur and nitrogen, which are toxic.
Incompatible with oxidising agents.

11. TOXICOLOGICAL INFORMATION

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

Acute Dermal Toxicity LD50 (Rabbit) >7500 mg/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: May cause sensitisation by skin contact.

Non-irritant to rabbit skin. Unlikely to cause skin irritation in man.
Unlikely to be hazardous by skin absorption.

Eye Contact: Slight/mild irritant to rabbit eyes. Dust may cause irritation.

Ingestion: Low oral toxicity.

Long Term Exposure: Studies in animals have shown that high doses produce embryo/foetotoxic effects. Studies in animals have shown that low doses produce no adverse reproductive effects.
For carcinogenicity (see; **OTHER INFORMATION**)

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Solid with low volatility.
The product is essentially insoluble in water.

Persistence and Degradation

The product shows no evidence for biodegradability in water.

Toxicity

Acute Fish Toxicity : LC50 (Rainbow trout) (96 hour) (static) 5.4 mg/l
EC50 (Daphnia magna) (48 hour) 18 mg/l
Acute Algae Toxicity : EC50 Algae (96 hr) 1.1 mg/l

Effect on Effluent Treatment

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

13. DISPOSAL CONSIDERATIONS

Do not allow into drains, watercourses or where ground/surface waters may be affected. Disposal should be in accordance with local, state or national legislation.

Contaminated packaging should also be treated as per local/national regulations.

14. TRANSPORT INFORMATION

Not Classified as Dangerous for Transport.

UN Number 3077

Class 9

Packing Group III

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
Solid, n.o.s (N-Cyclohexylbenzothiazole-2-sulphenamide)

Marine Pollutant Not classified as a Marine Pollutant

15. REGULATORY INFORMATION

EC Classification Irritant, Hazard Symbol Xi



Dangerous for the environment, N



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Risk Phrases: R50/53 Very toxic to aquatic organisms, may cause Long term adverse effects in the aquatic environment.
R43 May cause sensitisation by skin contact.

Safety Phrases: S24 Avoid contact with skin.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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

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

Special notes:

1. Users are referred to NTIS Report NTIS - PI3 - 223 –159 on the basis of which NIOSH-RTECS classifies it as a carcinogenic and equivocal tumourigenic agent by RTECS criteria.
2. Listed by the international Contact Dermatitis Group for routine skin patch testing in appropriate circumstances.

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