

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	CBS(CZ)
Manufacturer	TIANJIN EASTRICHON RUBBER ADDITIVES CO., LTD.
Chemical name	N-Cyclohexyl-2-benzothiazolesulfenamide
Synonym	Perkacit CBS; Santocure, CBS; 2-Benzothiazolesulfenamide, N-cyclohexyl-
Material uses	Accelerator.
Product type	Powder; Oiled powder; Granule

SECTION 2. HAZARDS IDENTIFICATION

Hazard Information

Emergency Overview	WARNING! Combustible dust - explosion potential. Keep away from heat, sparks, and flame. This material is irritating to skin, eyes and respiratory tract.
Eye Contact	Causes eye irritation. Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.
Skin Contact	May cause an allergic skin reaction. May cause a rash and itching of the skin. May cause skin defatting with prolonged exposure.
Inhalation	Causes moderate respiratory irritation. Irritating vapor causes immediate distress. Irritates mucous membranes. Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.
Ingestion	May be harmful if large amounts are swallowed. May cause liver and kidney damage.

SECTION 3. Composition/information on ingredients

Substance/mixture	Substance		
Ingredient name	CAS number	% by weight	
N-Cyclohexyl-2-benzothiazolesulfenamide	95-33-0	96-99	

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. First aid measures

Description of necessary first aid measures

In Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
On Skin	Remove contaminated clothing. wash skin with water, using soap if available. Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists.
Inhaled	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical

	attention.
Swallowed	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.
Notes To Physician	Provide symptomatic/supportive care as necessary. Treatment based on sound judgment of physician and individual reactions of patient. Observe for signs of respiratory distress.

SECTION 5. Fire-fighting measures

Flash Point (°F/C)	350°F / 177°C
Unsuitable extinguishing	Cleveland Open Cup
Autoignition Temp. (°F/C)	660°F / 349°C (Dust)
Lower Explosion Limit in Air (LEL)	Not Determined
Upper Explosion Limit in Air (UEL)	Not Determined
Extinguishing Media	Water fog, carbon dioxide, foam, dry chemical
Special Exposure Hazards	Fight fire from a safe distance and from a protected location. Flammable dust when in finely divided and highly suspended state. Use water spray to cool fire exposed surfaces. Decomposition in fire may produce toxic gases. Do not allow runoff to enter waterways
Special Protective Equipment	Fire fighters should wear full protective clothing, including self-contained breathing equipment
Unusual Fire/Explosion Hazards	Toxic emissions may result if product is involved in a fire. Fire produces highly toxic sulfur dioxide gas

SECTION 6. Accidental release measures

Spill Procedures	Wear protective equipment specified. Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.
Procedure for Cleaning/Absorption	Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Scoop up and remove. Do NOT spread spilled product with water.
CERCLA Reportable Quantity (RQ)	Not Applicable

SECTION 7. Handling and storage

Handling	Good hygienic practices should be observed. Work clothes should be washed separately at the end of each work day.
----------	---

	Disposable clothing should be discarded with material. Avoid generating or breathing dust. Avoid contact with eyes, skin and clothing. Reclose containers of unused product. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Do not reuse this container.
Storage	Store closed containers in a cool, dry, well-ventilated area. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Do not store near Crystex Insoluble Sulfur. Slowly degrades and releases irritating vapors under warm, humid conditions.

SECTION 8. Exposure controls/personal protection

Eye Protection	Wear safety glasses or goggles to protect against exposure. Eye protection is not required during typical product use conditions.
Skin Protection	Normal work coveralls. Launder contaminated clothing before reuse.
Gloves	Use gloves as a standard industrial handling procedure. All cleanable impervious glove types are acceptable.
Respiratory Protection	Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure. Firefighting; use a Positive Pressure Demand Full Face Self Contained Breathing Apparatus
Ventilation	General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. Adequate ventilation should be provided to keep dust concentrations below acceptable exposure limits. Discharge from the ventilation system should comply with the applicable air pollutions control regulations. Eliminate ignition sources
Airborne Exposure Limits	Nuisance Dust. OSHA PEL/8Hr-TWA = 15 mg/m ³ (Total Dust). OSHA PEL/8-Hr TWA = 05 mg/m ³ (Respirable Dust). ACGIH TLV/8-Hr TWA = 10 mg/m ³ . Cyclohexylamine: ACGIH TLV/8Hr TWA = 10 ppm. NIOSH REL/8Hr TWA = 10 ppm.

SECTION 9. Physical and chemical properties

Appearance	Off-white powder White to off-white granules.
Color	Gray-white.
Odor	MILD AMINE.
pH	Not available.
Melting point	97-105°C.
Boiling point	Not Determined.
Specific Gravity	1.3 @ 25°C.
Density	Unknown.
Bulk Density	1280 kg/m3.
Vapor pressure	Negligible.
Vapor density (Air=1)	Not Determined.
% Volatile by Volume	<0.5%
Solubility	Soluble in Acetone Ether Ethanol
Solubility in water	INSOLUBLE.
Viscosity	Not determined.
Other Data	Ash content = 0.3% max.
Molecular	264.4
Molecular Formula	C13-H16-S2-N2

SECTION 10. Stability and reactivity

Chemical Stability	Stable when stored at room temperature in closed, original container. Stable under normal conditions of handling, use and transportation. Stable if protected from heat and exposure to air. Loses potency with time Protect from moisture
Hazardous Polymerization	Will not occur
Conditions to Avoid	Keep away from heat, sparks and flame.
Materials to Avoid	Reducing agents. Contact with acids. Avoid contamination of product with small amounts of water. Do not store near Crystex Insoluble Sulfur.
Hazardous Decomposition Products	Carbon monoxide Oxides of nitrogen Oxides of sulfur Amines
Additional Guidelines	Amine vapors can cause insoluble sulfur to revert to soluble form.

SECTION 11. Toxicological information

Target Organs

Acute Oral LD50 (mg/kg)	5300 mg/kg
Acute Dermal LD50 (mg/kg)	>7940 mg/kg

SAFETY DATA SHEET
RUBBER ACCELERATOR CBS
DATE OF ISSUE 2019-8-22 VERSION 1.2

Acute Inhalation LC50 (mg/l)	Not Determined
Principle Routes of Exposure	Eyes. Inhalation. Dermal - skin.
Ingestion	May be harmful if large amounts are swallowed. May cause liver and kidney damage.
Skin Contact	May cause an allergic skin reaction. May cause a rash and itching of the skin. May cause skin defatting with prolonged exposure.
Inhalation	Causes moderate respiratory irritation. Irritating vapor causes immediate distress. Irritates mucous membranes. Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.
Eye Contact:	Causes eye irritation. Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.
Aggravated Conditions:	Pulmonary disorders. Dermal ailments. Eye, skin, respiratory, blood, liver and/or kidney ailments. This material or its emissions may cause an allergic or sensitization reaction and thereby aggravate systemic disease.
Carcinogenicity Comment:	This product or one of its ingredients present 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA. Carcinogenic: Category 3
Other:	Decomposition products and fumes from vulcanization and cross-linking may cause eye, skin and respiratory sensitization. May be a skin sensitizer. Product releases amine vapors during cure.
Primary Irritation Effect:	Moderately irritating.
Carcinogenicity:	Negative in standard tests using bacteria and yeast cells
Genotoxicity:	None
Reproductive/Developmental	No evidence of teratogenicity in animal studies using rats, mice and hamsters
Toxicity:	

SECTION 12. Ecological information

Acute Fish Toxicity	96Hr LC50 Rainbow Trout = 5.4 mg/l. 96Hr LC50 Bluegill Sunfish = 7.9 mg/l. 96Hr LC50 Fathead Minnow = >1000 mg/l.
Acute Crustaceans Toxicity	48Hr LC50 Daphnia Magna = 18.0 mg/l

SAFETY DATA SHEET

RUBBER ACCELERATOR CBS

DATE OF ISSUE 2019-8-22 VERSION 1.2

Acute Algae Toxicity	96Hr EC50 Algae (chlorophyll) = 1.1 ppm. 96Hr EC50 Algae (cell count) = 0.9 ppm.
Octanol/Water Coefficient	4.93 log P
Chemical Fate Information	Biodegradability: 4% CO2 evolution
Other Information	Not Available

SECTION 13. Disposal considerations

Disposal of Waste Method	This material is not a RCRA hazardous waste. Bury in a licensed landfill or burn in an approved incinerator according to federal, state, and local regulations. Empty containers should be handled in a manner not to cause dusting during collection, transportation and disposal.
Contaminated Packaging	If empty container retains product residues, all label precautions must be observed. Store away from ignition sources. Transport with all closures in place. Return for reuse or dispose according to national or local regulations. Dispose of container according to national or local regulations.

SECTION 14. Transport information

DOT:DOT Status	Not Regulated
DOT Shipping Name	NONE
DOT Reportable Quantity (lbs)	None
ICAO/IATA:Status	NOT REGULATED FOR TRANSPORTATION
Proper Shipping Name	None
UN/NA Number	NONE
IMDG:Status	Not Regulated
Proper Shipping Name	None
TDG (Canada):Status	Not Regulated
Proper Shipping Name	None

SECTION 15. Regulatory information

Worldwide Inventory Status	
TSCA (USA)	Listed
Canadian DSL	Listed
Canadian NDSL	N/A
EINECS/ELINCS (Europe)	Listed
Japanese Inventory (ENCS)	Listed
Korean Chemical Inventory (ECL)	Listed
Australian Chemical Inventories	Listed

SAFETY DATA SHEET

RUBBER ACCELERATOR CBS

DATE OF ISSUE 2019-8-22 VERSION 1.2

(AICS)

New Zealand (NZ)	Listed
Phillipines (PICCS) Inventory	Listed
China (CLECS)	Listed

US Regulatory Rules

SARA Section 302	None Found
SARA 311/312 Hazard Catagories	Immediate Delayed Fire
SARA 313 Chemical	2-Mercaptobenzothiazole.
RCRA Status	Not a RCRA waste.

Other Regulations

California Proposition 65	NONE
New Jersey Right-to-Know List	N/A
Pennsylvania Right to Know List	N/A
Florida Right to Know	N/A
Minnesota Right to Know	N/A
MA Right to Know Law	N/A

FDA Status 21 CFR	Regulated for Use under the following sections of 21 CFR: 177.2600 Rubber Articles Intended for Repeated Use in Food Contact.
-------------------	---

Canadian Regulations

WHMIS Hazard Class	D2B TOXIC MATERIALS / Materials Causing Other Toxic Effects
NPRI	N/A

SECTION 16. Other information

The following has been revised since the last issue of this MSDS:

Nothing has been revised.

Additional Information

The Additive package for this product may contain some of the following at levels up to 1%: Butyl Oleate CAS# 142-77-8. White Mineral Oil CAS# 8042-47-5. Methylcellulose CAS# 9004-67-5.

Important Note

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.