



橡胶助剂领军企业



山东尚舜化工有限公司

Shandong Sunsine Chemical Co.,Ltd.

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Sunsine Chemical

追求卓越品质 | 缔造世界品牌

尚舜



蜀道崎岖亦可行，

Hilly paths are accessible though bumpy.

心中有信路自通。

Faith in heart evens them under my feet.

名利淡泊忧患少，

Freedom from fame and vanity keeps worries off me;

私欲抛却公生明。

And selfless soul brightens my sight so fair.

三十余载烟云过，

I've seen the world for thirty-two years,

俯仰无愧慰平生。

But seen nothing regretful in my lifetime.

莫忆艰辛穷达事，

No haunting for the past, bitter or sweet,

无求慎思赴征程。

I choose to advance with mind but nothing more!





## COMPANY PROFILE 企业简介

中国尚舜化工控股有限公司（山东尚舜化工有限公司）是一家专业化工业企业，并于2007年7月5日在新加坡证券交易所主板上市，目前拥有总资产27.5亿元，员工2200多人，专业技术人员近700人，辖山东尚舜、潍坊尚舜、盛陶化工、广舜热力四个生产基地。公司产品主要有橡胶促进剂、防老剂、硫化剂等三大类十几个品种，广泛应用于橡胶、轮胎、胶鞋、胶管以及医药、农药等行业，出口40多个国家和地区，销量连续多年位居全球第一，拥有全球1000多家客户，包括服务超过65%的世界前75强轮胎企业。

China SunSine Chemical Holdings Ltd (Shandong sunsine chemical Co.,Ltd) is a leading specialty chemical producer, and was listed on the Main Board of the Singapore Exchange on 5 July 2007. It has a total asset of RMB 2.75 billion, 2200 employees, 700 professional technical staff over 40 years of development. There are four production bases - Shandong SunSine, Weifang SunSine, Sheng Tao and Guang Shun. The products include Rubber Accelerators, Insoluble Sulphur and Anti-Oxidant. Our products are widely used in and for the manufacture of rubber, tires, shoes, belts, pharmaceuticals and agrochemicals. Our products are exported to over 40 countries and regions. We are number one globally in market position based on total sales volume. We have over 1,000 customers, including the global top 75 customers in the tire industry.



## 企业方针 ENTERPRISE POLICY

坚持科技兴化，坚持以市场为导向，以质量求生存，以经济效益为中心，努力开拓新市场，积极开发新产品，全面提高企业素质。

Stick to developing the company through science and technology, stick to market-oriented, survive on quality, center on economic efficiency, strive to explore new markets, develop new products and improve the entire quality of the enterprise.



## 发展历程

### DEVELOPMENT HISTORY

- 1977年** 单县有机化工厂建厂  
1977 Factory established in Shanxian.
- 1994年** 进入橡胶助剂行业。  
1994 Entered the rubber chemical industry.
- 1998年** 12月企业改制。  
1998 Ownership changed
- 2005年** 尚舜工业园开建。  
Aug.2005 Sunsiene Industrial Park started construction.
- 2007年** 7月5日在新加坡主板成功上市。  
Jul 5th.2007 Listed in the main board in the SGX.
- 2010年** 潍坊尚舜子公司成立。  
2010 Welfang Sunsiene subsidiary company was established.
- 2012年** 盛陶子公司成立。  
2012 Shengtao subsidiary company was established .
- 2013年** 广舜热力子公司成立。  
2013 Guangshun power station was established.
- 2015年** 浮龙度假村子公司成立。  
2015 Established Fu Long Resort Co., LTD.

- 2016年** 永舜环保科技有限公司成立，为菏泽市首家危废处理中心。  
2016 Yongshun environmental protection technology subsidiary company was established, as the first hazardous waste treatment center in Heze city. .
- 2017年** 荣获工信部“制造业单项冠军示范企业”。  
2017 Won the title of "National Champion Manufacturing Enterprise" of ministry of industry and information technology
- 2020年** 恒舜新材料子公司成立。  
HengShun new material was established.

集团结构  
GROUP STRUCTURE

中国尚舜控股  
CHINA SUNSINE  
CHEMICAL HOLDINGS  
LTD



# SHANGSHUN

中国尚舜化工控股有限公司  
CHINA SUNSINE CHEMICAL HOLDINGS LTD

## SHANDONG SUNSINE CHEMICAL

>>> 山东尚舜化工  
主要生产基地 Main production base



WEIFANG

**WEIFANG  
SUNSINE CHEMICAL**

>>> 潍坊尚舜化工

促进剂生产基地之一 One of the accelerator production bases.



SHENGTAO

**DINGTAO  
SHENGTAO CHEMICAL**

>>> 定陶盛陶化工

不溶性硫磺生产基地之一  
One of the IS production bases.





# FULONG

## SHANDONG FULONG RESORT LTD

>>> 浮龙度假村

山东浮龙度假村有限公司为山东尚舜化工有限公司全资子公司，坐落于国家“4A级旅游风景区”——单县浮龙湖风景区的栈桥东盟诸岛上。浮龙度假村为星级度假型酒店，集餐饮、会议接待、客房、娱乐为一体，设施完善，服务一流，菜品独特，环境优雅，是商务宴请、会务接待、旅游度假最理想的家园。

Shandong Fulong Resort Ltd is a wholly owned subsidiary of Shandong Sunshine Chemical Holdings Ltd.. It is located in the national AAAA level scenic spot—Mengzhu Island in east pier of Shanxian Fulong lake scenic area. Fulong Resort is a star resort hotel, including catering, conference reception, accommodation and entertainment. It has excellent facilities, first-class service, unique dishes and elegant environment, which is ideal home for business banquets, conference reception and tourist resort.



## YONGSHUN ENVIRONMENT PROTECTION TECHNOLOGY

>>> 永舜环保科技

山东永舜环保科技，是一家专业的危废处理中心，每年可处理危废3万吨。

YONGSHUN Environment Protection Technology, a wholly-owned subsidiary of Shandong Sunshine chemicals, which can dispose of hazardous waste 30000 tons/year as a professional hazardous waste treatment center.



# GUANGSHUN

## SHANXIAN GUANGSHUN POWER STATION

>>> 单县广舜热力

单县广舜热力，为单县化工园区输送热力。

A wholly-owned subsidiary of Shandong Sunshine Chemicals, supplying steam for Shanxian chemical industrial park.



## 海外上市

OVERSEA LISTING



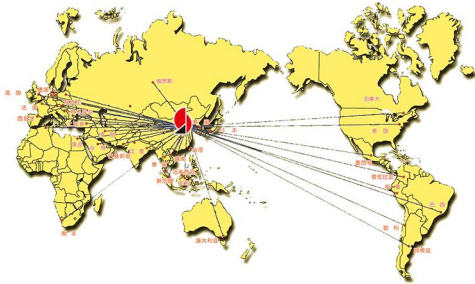
## 尚舜化工成功上市 Oversea Listing

2007年7月5日尚舜化工成功在新加坡主板上市，实现了菏泽市上市企业零的突破，是公司实现快速持续健康发展的重要里程碑。

On July 5, 2007, Sunshine Chemical successfully listed on the main board of Singapore, achieving zero breakthrough of heze listed enterprises, which is an important milestone for the company to achieve rapid, sustainable and healthy development.



## 市场分布 MARKET DISTRIBUTION



公司产品出口亚洲、欧美等40多个国家和地区，拥有全球1000多家客户，包括世界前十大轮胎制造商和中国前十大轮胎制造商，主要产品是橡胶促进剂、防老剂、硫化剂、橡胶预分散体化学品，总生产能力18万吨，促进剂产量遥遥领先。

Our products have been exported to more than 40 countries and regions including Asia, Europe, America etc., and we have more than 1000 customers including the top 10 tire producers in the world and the top 10 tire producers in China. The main products are rubber accelerators, rubber anti-oxidant, vulcanizing agent and master batch, and the capacity is 180,000 metric tons per year. The productivity of rubber accelerator is listed in the world.

## 环境保护 ENVIRONMENTAL PROTECTION



在企业发展过程中，公司始终坚持环保是企业发展的第一要务的理念，把环保工作作为企业的“生命工程”来抓，牢固树立资源节约、环境友好、科学发展、可持续发展的生产经营理念，在环保治理上不惜投资，把“建设美丽和谐尚齐”作为我们企业发展的一种责任、一项使命来认识并身体力行。

"Building a beautiful harmony in Sunsine" is our mission statement, illustrating our relentless commitment to incorporate sustainability into every aspect of our business ethos. We strive to develop our business responsibly and efficiently through conserving resources, being environmentally friendly, and investing in the latest technology to drive sustainable development.



## 安全管理 SAFETY MANAGEMENT



公司依法提取安全生产费用，加大安全投入，对各种危化品使用、储存、输送设备进行改造升级，优化了硬件安全设施。采用安全可靠的新技术、新材料和新装备，提高工艺技术和自动控制水平，提高企业控制安全风险的能力，不断改进安全生产条件。公司依法为从业人员提供劳动防护用品，教育、监督其正确佩戴和使用。

We have increased safety related expenditure to comply with regulations, and this has improved our ability to manage occupational risks posed to our employees. We have upgraded our facilities related to the storage, transportation and processing of hazardous chemicals. Constant improvements are being made to the production environment. We also provide our employees with protective equipment, safety training and supervision in accordance with all regulatory requirements.



## 社会责任CSR



尚舜化工热心公益事业，主动履行社会责任，累计为公益事业捐资四千多万元，积极增加就业岗位，为下岗工人和退伍军人提供就业岗位，赢得了社会的广泛赞誉。

Sunsine Chemical was enthusiastic about public welfare, initiative to fulfill social responsibilities, donated more than 40 million yuan to public welfare work, actively increased employment, provided jobs for laid-off workers and veterans, which has won wide praise.



## PRODUCTS CATALOG

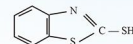
### >>> 主要产品目录

主要产品			MAIN PRODUCTS			标识色
产品名称	生产能力 (吨/年)		CHEMICAL NAME	the annual output (Ton/year)	NAME	
噻唑类 促进剂	MBT(M)	50000	THIAZOLE TYPE ACCELERATOR	MBT(M)	50000	
	MBTS(DM)	15000		MBTS(DM)	15000	
次磺酰 胺类 促进剂	CBS(CZ)	30000	SULPHENAMIDE TYPE ACCELERATOR	CBS(CZ)	30000	
	TBBS(NS)	50000		TBBS(NS)	50000	
	DCBS(DZ)	5000		DCBS(DZ)	5000	
秋兰姆 类 促进剂	TMTD (TT)	5000	THIURAM TYPE ACCELERATOR	TMTD (TT)	5000	
胍类 促进剂	DPG(D)	10000	GUANIDINE TYPE ACCELERATOR	DPG(D)	10000	
	TMQ(RD)	40000		TMQ(RD)	40000	
防老剂	6PPD(4020)	30000	ANTIOXIDANTS	6PPD(4020)	30000	
	IPPD(4010NA)	5000		IPPD(4010NA)	5000	
RT 培司		30000	RT BASE		30000	
硫化剂	不溶性硫磺 (IS)	60000	VULCANIZING AGENT	Insoluble Sulfur (IS)	60000	
橡胶预 分散体		5000	PRE-DISPERSION		5000	

## 橡胶硫化促进剂 MBT, M 标识色

化学名称: 2-巯基苯并噻唑  
Chemical Name: 2-Mercaptobenzothiazole  
分子式/ Molecular Formula: C<sub>4</sub>H<sub>3</sub>N<sub>2</sub>S<sub>2</sub>  
分子量/ Molecular Weight: 167.23  
CAS 注册号/ CAS NO: 149-30-4

产品标准/ Technical Specification: GB/T 11407-2013  
结构式/ Structural Formula:



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	灰白色至淡黄色粉末或颗粒 grayish-white to light yellow powder or granule
初熔点, C, ≥ Melting point, C, min	170.0 170.0
加热减量, % ≤ Heating loss, %, max	0.30 0.30
灰分, % ≤ Ash content, %, max	0.30 0.30
筛余物 (150μm), % ≤ Residue (150μm), %, max	0.10 0.10
纯度, % ≤ Purity, %, min	97.0 97.0

顾客有特殊要求时按客户标准执行。

#### 性状: Properties:

淡黄色或灰白色粉末或粒状, 微臭, 无毒, 比重 1.42-1.52, 熔点 170°C 以上, 易溶于乙酸乙酯、丙酮、氢氧化钠及碳酸钠的稀溶液中, 溶于乙醇, 不易溶于苯, 不溶于水和汽油。贮存稳定。

Grayish-white or light yellow powder or granule with slightly foul odour and bitter taste, non-poisonous. Specific gravity: 1.42-1.52, melting point over 170°C. Easily soluble in ethyl acetate, acetone, dilute solution of sodium hydroxide and sodium carbonate, soluble in ethyl alcohol, not easily soluble in benzene, insoluble in water and gasoline. Stable in storage.

#### 用途: Application:

天然胶与合成胶用促进剂, 具有宽广的硫化范围, 可单独使用, 或与二硫代氨基甲酸酯类、秋兰姆类、胍类和其它磺性促进剂并用。主要用于制造轮胎、胶布、胶鞋和其它工业橡胶制品。

Accelerator M is a hemi-ultra accelerator of NR and SR, has wide range of vulcanization. It can be applied alone and together with dithiocarbamates, thiuram type, guanidines and other alkaline accelerators. Mainly used in manufacture of rubber tires, belts, rub-ber shoes and other technical rubber goods.

#### 包装: Package:

编织袋内衬塑料袋或牛皮纸复合袋, 25kg/袋。或按客户要求。  
In knitted bag lined with plastic bag or kraft paper bag, 25kgs/bag or at buyers' request.

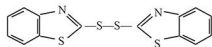


## 橡胶硫化促进剂 MBTS,DM

标识色 ■

化学名称：二硫化二苯并噻唑  
Chemical Name: 2-Mercaptobenzothiazole  
分子式/Molecular Formula: C<sub>6</sub>H<sub>4</sub>N<sub>2</sub>S<sub>2</sub>  
分子量/Molecular Weight: 332.44  
CAS 注册号/CAS NO: 120-78-5

产品标准/Technical Specification: GB/T 11408-2013  
结构式/Structural Formula:



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	灰白色至淡黄色粉末或颗粒 greyish-white to light yellow powder or granule
初熔点, C, ≥ Melting point, C, min	164.0 164.0
加热减量, %, ≤ Heating loss, %, max	0.40 0.40
灰分, %, ≤ Ash content, %, max	0.50 0.50
筛余物(150µm), %, ≤ Residue(150µm), %, max	0.10 0.10
游离 MBT, %, ≤ Free, MBT, %, max	1.0 1.0
纯度, %, ≤ Purity, %, min	95.0 95.0

顾客有特殊要求时按客户标准执行。

### 性状:

Properties:

灰白色至淡黄色粉末或颗粒, 微有气味, 无毒。比重1.47-1.55, 熔点164°C以上, 可溶于氯仿, 不溶于汽油、水和乙酸乙酯。  
Greyish-white to light yellow powder or granule with slightly bitter taste, nonpoisonous. Specific gravity: 1.47-1.55. Melting point: over 164°C. Soluble in chloroform, insoluble in gasoline, water and ethyl acetate. Stable in storage.

### 用途:

Application:

天然胶及多种合成胶用促进剂, 可产生平温和中速硫化, 硫化温度较高。操作安全, 易分散, 不污染, 硫化胶耐老化。主要用于制造轮胎、胶管、胶鞋、帆布等一般工业品。DM 在氯丁胶中还可起到增塑剂或延迟剂的作用。

The product is an accelerator of NR and SR. It has elevated middle cure rate and higher Vulcanization temperature. It operates safely, disperses easily and does not con-taminate. It is aging resistant. Mainly used in manufacture of tires, rubber tubes, rubber shoes, rubber cloth and othertechnical rubber goods. Accelerator MBTS works as plas-ticizer and delayed action activator in polychloroprene.

### 包装:

Package:

编织袋内衬塑料袋或牛皮纸复合袋, 20kg, 25kg/袋。或按客户要求。  
In knitted bag lined with plastic bag or kraft paper bag 20kgs, 25kgs/bag or at buyers' request.

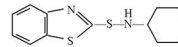
16 SUNSINE

## 橡胶硫化促进剂 CBS, CZ

标识色 ■

化学名称: N-环己基-2-苯并噻唑次磺酰胺  
Chemical Name: N-Cyclohexyl-2-benzothiazole sulfenamide  
分子式/Molecular Formula: C<sub>11</sub>H<sub>16</sub>N<sub>2</sub>S<sub>2</sub>  
分子量/Molecular Weight: 264.42  
CAS 注册号/CAS NO: 95-33-0

产品标准/Technical Specification: GB/T 31332-2014  
结构式/Structural Formula:



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	灰白色至淡黄色粉末或颗粒 greyish-white to light yellow powder or granule
初熔点, C, ≥ Melting point, C, min	97.0 97.0
加热减量, %, ≤ Heating loss, %, max	0.40 0.40
灰分, %, ≤ Ash content, %, max	0.30 0.30
筛余物(150µm), %, ≤ Residue(150µm), %, max	0.10 0.10
游离胺, %, ≤ Free amine, %, max	0.50 0.50
甲醇不溶物, %, ≤ Insoluble In methanol, %, max	0.50 0.50
纯度, %, ≤ Purity, %, min	97.0 97.0

顾客有特殊要求时按客户标准执行。

### 性状:

Properties:

灰白色至淡黄色粉末或颗粒, 稍有气味, 无毒。比重1.26-1.30, 熔点96°C以上, 易溶于苯、甲苯、氯仿、二硫化碳、二氯甲烷、丙酮、乙酸乙酯, 不易溶于乙醇, 不溶于水和稀酸、稀碱和汽油。

Greyish-white to white or yellowish powder or granule with slightly odour and nonpoisonous. Specific gravity: 1.26-1.30. Meltingpoint: over 96°C. Soluble in benzene, methylbenzene, chloroform, carbon disulfide, carbon tetrachloride, methyl-ene chloride, acetone and ethyl acetate; not easily soluble in ethyl alcohol, insoluble in water, dilute acid, dilute alkali and gasoline.

### 用途:

Application:

CBS(CZ) 是一种高度活性的后效促进剂, 抗焦烧性能优良, 加工安全, 硫化时间短。碱性促进剂如坎兰姆类和二硫化氨基甲酸盐类可增强其活性。主要用于制造轮胎、胶管、胶鞋、电缆等工业橡胶制品。

CBS(CZ) is an accelerator with high activity and has greatly delayed action, high anti-scorching quality, processing safety, short cure time. Its activity can be reinforced by titanium and diethiocarbamate typealkaline accelerators. Mainly used in manufacture of tires, rubber shoes, rubber tube, cable and other technical rubber goods.

### 包装:

Package:

编织袋内衬塑料袋或牛皮纸复合袋, 25kg/袋。或按客户要求。  
In knitted bag lined with plastic bag or kraft paper bag 25kgs/bag or at buyers' request

SUNSINE 20

## 橡胶硫化促进剂 TBBS, NS 标识色 ■

化学名称: N-叔丁基-2-苯并噻唑次磺胺盐

产品标准/Technical Specification: GB/T 21840-2008

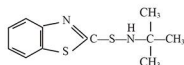
Chemical Name: N-Tertiarybutyl-2-benzothiazole sulfenamide

结构式/Structural Formula:

分子式/Molecular Formula: C<sub>11</sub>H<sub>16</sub>N<sub>2</sub>S<sub>2</sub>

分子量/Molecular Weight: 238

CAS 注册号/CAS NO.: 95-31-8



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	白色至淡黄色粉末或颗粒 White to yellowish powder or granule
初熔点, C, ≥ Melting point, C, min	104.0 104.0
加热减量, % ≤ Heating loss, % max	0.40 0.40
灰分, % ≤ Ash content, % max	0.30 0.30
筛余物 (150μm), % ≤ Residue (150μm), % max	0.10 0.10
甲醇不溶物, % ≤ Insoluble in methanol, % max	1.0 1.0
游离胺, % ≤ Free amine, % max	0.50 0.50
纯度, % ≤ Purity, % min	96.0 96.0

顾客有特殊要求时按客户标准执行。

### 性状:

Properties:

NS为白色或淡黄色粉末或颗粒。密度为1.25-1.30g/cm<sup>3</sup>，溶于苯、氯仿、二硫化碳、丙酮、甲醇、乙醇，难溶于汽油，不溶于水、稀酸、稀碱。

It is white or yellowish powder or granule. Density: 1.26-1.32g/cm<sup>3</sup>. Soluble in benzene, chloroform, carbon disulfide, acetone, methanol, ethanol, but hard in gasoline, insoluble in water, dilute acid and dilute alkali.

### 用途:

Application:

NS为高效性硫化促进剂，硫化时间短，抗焦烧性能优良，加工安全。广泛用于各种橡胶制品及轮胎，特别是子午线轮胎的加工。具有高效高速等优点。

NS is a Vulcanization accelerator with delayed action, short cure time, has high anti-scorching quality, processing safety. Widely used in all sorts of rubber products and tires, especially the meridian tires. The product is an excellent delayed accelerator with more delayed action and great curing rate and other advantages.

### 包装:

Package:

编织袋内衬塑料袋或牛皮纸复合袋，25kg/袋。或按客户要求。

In knitted bag lined with plastic bag or kraft paper bag. 25kgs/bag or at buyers', request

## 橡胶硫化促进剂 DCBS, DZ 标识色 ■

化学名称: N,N'-二环己基-2-苯并噻唑次磺胺盐

产品标准/Technical Specification: HG/T 4140-2010

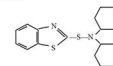
Chemical Name: N,N'-Dicyclohexyl-2-benzothiazole sulfenamide

结构式/Structural Formula:

分子式/Molecular Formula: C<sub>20</sub>H<sub>30</sub>N<sub>2</sub>S<sub>2</sub>

分子量/Molecular Weight: 346.58

CAS 注册号/CAS NO.: 4979-32-2



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	浅黄色至粉红色粉末或颗粒 Light yellow to light pink powder or granule
初熔点, C, ≥ Melting point, C, min	97.0 97.0
加热减量, % ≤ Heating loss, % max	0.40 0.40
灰分, % ≤ Ash content, % max	0.30 0.30
游离胺, % ≤ Free amine, % max	0.40 0.40
环己烷不溶物, % ≤ Insoluble in cyclohexane, % max	0.50 0.50
纯度, % ≤ Purity, % min	97.0 97.0

顾客有特殊要求时按客户标准执行。

### 性状:

Properties:

浅黄色至粉红色粉末或颗粒。密度为1.20-1.27g/cm<sup>3</sup>，熔点96℃以上，不溶于水，溶于汽油，易溶于乙醇、乙醚、丙酮、苯、甲苯、二氯甲烷、四氯化碳和乙醚-苯等有机溶剂中。

Light yellow to light pink powder or granule. Density: 1.20-1.27g/cm<sup>3</sup>. Melting point: over 96°C. Insoluble in water, soluble in gasoline, easily soluble in ethanol, ether, acetone, benzene, toluene, methylene chloride, carbon tetrachloride, ethyl acetate and other organic solvent.

### 用途:

Application:

DZ(DCBS)具有次磺胺类促进剂最好的防焦烧性能。在天然胶中抗焦烧性能及操作安全性均优于DIBS。主要用于制造轮胎、胶带、减震器。

The product possess the best antiscorching quality of sulfenamide type accelerators. Its antiscorching quality and processingsafety in natural rubber are better than that of DIBS. Mainly used in manufacture of tires, rubber belts and shock absorber.

### 包装:

Package:

编织袋内衬塑料袋或牛皮纸复合袋，25kg/袋。或按客户要求。

In knitted bag lined with plastic bag or kraft paper bag. 25kgs/bag or at buyers', request.

## 橡胶硫化促进剂 TMTD, TT

标识色 ■

化学名称：二硫化四甲基秋兰姆

Chemical Name: Tetramethyl thiuram disulfide

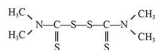
分子式/Molecular Formula: C<sub>4</sub>H<sub>12</sub>N<sub>2</sub>S<sub>2</sub>

分子量/Molecular Weight: 240.43

CAS 注册号/CAS NO: 137-26-8

产品标准/Technical Specification: HG/T 2334-2007

结构式/Structural Formula:



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	白色或淡灰色粉末或颗粒 White or grayish powder or granule
初熔点, C, ≥ Melting point, C, min	140.0 140.0
加热减量, % ≤ Heating loss, %, max	0.30 0.30
灰分, % ≤ Ash content, %, max	0.30 0.30
筛余物 (150μm), % ≤ Residue (150μm), %, max	0.05 0.05
纯度, % ≤ Purity, %, min	96.0 96.0

顾客有特殊要求时按客户标准执行。

### 性状:

Properties:

白色或灰白色粉末或颗粒, 比重1.38-1.42g/cm<sup>3</sup>, 能溶于苯、丙酮、氯仿、二硫化碳, 不溶于水或汽油。

White or grayish powder or granule. Specific gravity: 1.38-1.42g/cm<sup>3</sup>. Soluble in benzene, acetone, chloroform, carbon disulfide. Insoluble in water and gasoline.

### 用途:

Application:

橡胶工业中用作硫化促进剂, 适用于天然胶、合成胶。主要用于制造轮胎、内胎、胶鞋、电缆等橡胶工业制品。农业上用作杀菌剂和杀虫剂, 也可用作润滑油添加剂。

TMTD is used as a vulcanization accelerator in the rubber industry. It is suitable for NR and SR. Mainly used in the manufacture of tires, rubber shoes, cable and other technical rubber goods. Used as germicide and insecticide in agriculture, also as lubricant additive.

### 包装:

Package:

编织袋内衬塑料袋或牛皮纸复合袋, 25kg/袋。或按客户要求。

In knitted bag lined with plastic bag or kraft paper bag. 25kg/bag or at buyers', request.

## 橡胶硫化促进剂 DPG, D

标识色 ■

化学名称：二苯胍

Chemical Name: Diphenyl guanidine

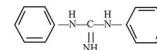
分子式/Molecular Formula: C<sub>13</sub>H<sub>11</sub>N<sub>3</sub>

分子量/Molecular Weight: 211.27

CAS 注册号/CAS NO: 102-06-7

产品标准/Technical Specification: HG/T 2342-2010

结构式/Structural Formula:



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	白色或灰白色粉末或颗粒 White or grayish white powder or granule
初熔点, C, ≥ Melting point, C, min	144.0 144.0
加热减量, % ≤ Heating loss, %, max	0.25 0.25
灰分, % ≤ Ash content, %, max	0.30 0.30
筛余物 (150μm), % ≤ Residue (150μm), %, max	0.10 0.10
纯度, % ≤ Purity, %, min	97.0 97.0

顾客有特殊要求时按客户标准执行。

### 性状:

Properties:

无味, 无毒。易溶于丙酮、乙酸乙酯, 溶于苯、乙醇, 微溶于四氯化碳, 不溶于水和汽油。

Without odour and poison. Easily soluble in acetone, ethyl acetate; Soluble in benzene, ethanol; Slightly soluble in carbon tetrachloride; Insoluble in water and gasoline.

### 用途:

Application:

通用于天然胶与合成胶。主要用于制造轮胎、胶板、胶鞋等橡胶工业制品。

Generally used for natural and synthetic rubbers. Mainly used in manufacture of tires, slab rubber, rubber shoes and other technical rubber products.

### 包装:

Package:

编织袋内衬塑料袋或牛皮纸复合袋, 20kg, 25kg/袋。或按客户要求。

In knitted bag lined with plastic bag or kraft paper bag. 20kg, 25kg/bag or at buyers', request.



## 橡胶防老剂 TMQ, RD, TQO 标识色

化学名称: 2,2,4-三甲基-1,2-二氢化喹啉聚合物 产品标准/Technical Specification: GB/T 8826-2019

Chemical Name: Polymerized 2,2,4-trimethyl-1,2-dihydroquinoline 结构式/Structural Formula:

分子式/Molecular Formula:  $(C_{12}H_{18}N)_n$  n=2-4

分子量/Molecular Weight: (173.26)n

CAS 注册号/CAS NO: 26780-96-1



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观(目测) Appearance	琥珀至棕色粒状 Amber to brown flake
软化点, °C, >	80-100
Softening point, °C, min	80-100
加热减量, % <	0.30
Heating loss, % max	0.30
灰分, % <	0.3
Ash content, % max	0.3
乙醇不溶物, % <	0.20
Insoluble in ethanol, % max	0.20
二、三、四聚体总量, % >	40
Dimer, trimer, tetramer content, % min	40

顾客有特殊要求时按客户标准执行。

**性状:**  
Properties:

本品为琥珀色细片, 密度为1.03-1.09g/cm<sup>3</sup>。能溶于苯、氯仿、二硫化碳及丙酮中, 不溶于水。与橡胶相容性好, 本品可燃, 贮存时注意防火、防潮。

This product is brown piece of amber, Density: 1.03-1.09g/cm<sup>3</sup>. Soluble in benzene, chloroform, carbon disulfide and acetone, but not soluble in water. Fine solution with rubber. This product is combustible, when storing and transporting, always pay attention to fireproof and dampproof.

**用途:**  
Application:

RD是一类极为重要的橡胶防老剂, 对热、氧和疲劳老化有显著的防护效果, 对金属催化氧化有较弱的抑制作用, 无堵塞现象, 广泛用于制造轮胎、摩托车胎、自行车胎、胶鞋、胶管、胶带、电线、电缆及其它橡胶制品。

RD is a very important category rubber antioxidant. It has a good protective effect for heat, oxygen and fatigue aging, and stronger inhibitory effect for metal catalytic oxidation, no spray cream phenomenon, widely used in the manufacture of tyres, motorcycles births, bicycles births, rubber, plastic, adhesive tape, wires, cables and other rubber products.

**包装:**  
Package:

编织袋内衬塑料袋或牛皮纸复合袋, 25kg/袋。或按客户要求。

In knitted bag lined with plastic bag or kraft paper bag. 25kgs/bag or at buyers', request.

## 橡胶防老剂 6PPD, 4020 标识色

化学名称: N(1,3-二甲基丁基)-N/-苯基对苯二胺 产品标准/Technical Specification: GB/T 21841-2019

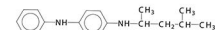
Chemical Name: N-(1,3-DIMETHYLBUTYL)-N'-PHENYL-PHENYLENEDIAMINE

结构式/Structural Formula:

分子式/Molecular Formula:  $C_{14}H_{22}N_2$

分子量/Molecular Weight: 268.40

CAS 注册号/CAS NO: 793-24-8



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观 Appearance	紫褐色至黑褐色颗粒或片状 Purple brown to dark brown flake granule or flake
纯度, % (面积归一法), >	97.0
Assay, % min (Area normalization method)	97.0
凝固点, °C, >	45.5
Freezing point, °C, min	45.5
加热减量, % <	0.50
Heating Loss, % max	0.50
灰分, % <	0.1
Ash content, % max	0.1

顾客有特殊要求时按客户标准执行。

**性状:**  
Properties:

纯品6PPD为白色固体, 置于空气中会逐渐氧化成褐色固体。工业品为紫褐色至黑褐色颗粒或片状, 温度超过35-40°C时会慢慢结块。溶于汽油、苯、丙酮、乙酸乙酯、二氧乙烷、四氯化碳、甲苯、乙醇等有机溶剂, 不溶于水。

Pure 6PPD is white solid product, and will gradually oxidize to brown solid when exposed to the air. Industrial product 6PPD is purple brown to black brown granules or flakes, and will slowly cake when the temperature exceeds 35-40°C. Soluble in gasoline, benzene, acetone, ethyl acetate, dichloroethane, carbon tetrachloride, methylenzene, ethylalcohol and other organic solvents, insoluble in water.

**用途:**  
Application:

6PPD为对苯二胺类橡胶防老剂, 它与橡胶的相容性较好, 不易挥发, 不易挥发, 毒性低, 具有优良的抗氧、抗臭氧、抗曲挠龟裂、日晒龟裂, 对铜锰等有毒金属有较强的抑制作用, 适用于各类合成橡胶和天然橡胶。在胶料中分散性好, 对胶料有软化作用, 对硫化影响不大。可用于轮胎等各类橡胶制品。

As a kind of ursoil rubber antioxidant, 6PPD has better compat-ibility with rubbers, seldom blooming, low volatility, low toxic-ity, with excellent antioxidant, anti-ozone, anti-flex cracks, anti-insolation cracks, strong inhibition on copper, manganese and other toxic metals, applicable to all types of synthetic rubber and natural rubber. With good dispensability in sizing material and little effect on vulcanization, it can soften sizing material, so can be used for tires and other kinds of rubber products, also can be used as heat oxygen stabilizer for polyethylene, polypropylene and acrylic resin.

**包装:**  
Package:

牛皮纸复合袋, 20kg, 25kg/袋。

N.W. 25kg/bag, or N.W. 25kg/bag, packed with kraft paper bag.

## RT培司 标识色

化学名称: 对-氨基二苯胺

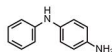
Chemical Name: 4-Aminodiphenylamine(abbr. name: 4-ADPA)

分子式/ Molecular Formula: C<sub>12</sub>H<sub>11</sub>N<sub>2</sub>

分子量/ Molecular Weight: 184.24

产品标准/ Technical Specification: HG/T4231-2018

结构式/ Structural Formula:



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观 Appearance	灰褐色至紫褐色固体或熔融液体 Appearance Grayish-brown to puce solid or molten liquid
凝固点, C, ≥ Freezing point, C, Min	70.0 70.0
含量, %, ≥ Assay, %, Min	99 99
灰分, %, ≤ Ash Content, %, Max	0.10 0.10
加热减量, %, ≤ Heating loss, %, Max	0.50 0.50

顾客有特殊要求时按客户标准执行。

### 性状: Properties:

本品为灰褐色至紫褐色固体或熔融液体, 密度1.07g/cm<sup>3</sup>, 可溶乙醇、难溶于水、但易溶于酸、碱溶液中。

Grayish-brown to puce solid or molten liquid, specific gravity 1.07g/cm<sup>3</sup>, soluble in ethylalcohol, acid and alkali solution, hardly soluble in water.

### 用途: Application:

主要用于染料和助剂的中间体, 主要用于防老剂4010NA、4020等多种主要的防老剂, 制造蓝色盐RT、酸性大红GR分散黄GFLA。本品有毒, 具有较强的刺激性。

Mainly used in dyes and additives intermediate, antioxidant 4010NA, 4020/6PPD and other dominating antioxidants, producing blue salt RT, acid red GR, disperse Yellow GFLA. It is toxic, with a strong irritant.

### 包装: Package:

铁桶, 200kg/桶。  
Metal drum, 200kg/drum.

## 橡胶防老剂 IPPD, 4010NA 标识色

化学名称: N-异丙基-N'-苯基对苯二胺

Chemical Name: N-isopropyl-N'-phenyl-p-phenylenediamine

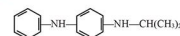
分子式/ Molecular Formula: C<sub>15</sub>H<sub>15</sub>N<sub>2</sub>

分子量/ Molecular Weight: 226.31

CAS 注册号/ CAS NO: 101-72-4

产品标准/ Technical Specification: GB/T 8828-2003

结构式/ Structural Formula:



指标名称 NAME OF INDEX	产品技术要求 TECHNICAL SPECIFICATIONS
外观 Appearance	灰紫色至紫褐色粒状固体 Grey purple to puce granular solids
纯度/ C, ≥ Purity, %, min	92.0 92.0
熔点/ C, ≥ Melting point, C, min	70.0 70.0
加热减量, %, ≤ Heating loss, %, max	0.50 0.50
灰分, %, ≤ Ash content, %, max	0.30 0.30

顾客有特殊要求时按客户标准执行。

### 性状: Properties:

相对密度1.14, 熔点 80.5°C。溶于油类、丙酮、苯、四氯化碳、二硫化碳和乙醇, 难溶于汽油, 不溶于水。

Density: 1.14g/cm<sup>3</sup>, melting point: 80.5°C. Soluble in acetone, ethyl acetate, carbon tetrachloride, carbon disulfide, ethyl alcohol. Insoluble in water.

### 用途: Application:

本品为污染型抗氧化剂, 是胺类防老剂中性能优良的通用型防老剂之一, 具有优良的抗氧、抗臭氧、抗紫外线、抗日晒龟裂和抑制铜锈等有更金属离子的作用, 主要用于天然橡胶和合成橡胶, 分散性好, 对硫化无影响, 可用于轮胎等各类橡胶制品, 也可作为聚乙烯、聚丙烯、丙烯酸树脂的热氧稳定剂。

This product is a polluting antioxidants, is one of the amine stabilizer with the high performance general-purpose antiager, has excellent antioxidant, anti-ozone, anti-flex crack, anti-insolation cracks, strong inhibition on copper or manganese and other toxic metals, applicable to all types of synthetic rubber and natural rubber. With good dispensability in sizing material and little effect on vulcanization, it can be used for tires and other kinds of rubber products, also can be used as heat oxygen stabilizer for polyethylene, polypropylene and acrylic resin.

### 包装: Package:

牛皮纸复合袋, 25kg/袋或按客户要求。  
In kraft paper bag, 25kg/bag or by buyers' request.

## 不溶性硫磺 Insoluble Sulfur 标识色

化学名称: 聚合硫

Chemical name: INSOLUBLE SULFUR

CAS 注册号/CAS NO: 9035-99-8

产品标准/Technical Specification: GB/T18952-2017

分子式/Molecular Formula: (S)<sub>n</sub>

项目 Subject	充油型普通不溶性硫磺 Oil Treated Insoluble Sulfur				充油型高性能不溶性硫磺 Oil Treated High Performance Insoluble Sulfur					
	IS 8010	IS 7720	IS 7520	IS 7020	IS 6033	超级 OT-20	HD OT-20	HS OT-10	HS OT-20	HS OT-33
外观 Appearance	黄色粉末 Yellow powder				黄色粉末 Yellow powder					
元素硫含量 Sulfur Content%	89-91	79-81	79-81	79-81	66-68	78.5-81.5	78.5-81.5	89-91	79-81	66-68
不溶性硫磺含量 Insoluble Sulfur Content, %	81	77	75	72	60	72	72	81	72	60
油含量 Oil Content, %	9-11	19-21	19-21	19-21	32-34	18.5-21.5	18.5-21.5	9-11	19-21	32-34
酸度 (以H2SO4计) Acid Content (as H2SO4), % ≤ max	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
加热减量 Heating loss (600°C), % ≤ max	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
灰分 Ash, % ≤ max	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
筛余物 Residue (150µm), % ≤ max	0.30	0.30	0.30	0.30	0.30	/	/	0.30	0.30	0.30
高粘度定性 High temp Stability (95 °C /15min), ≥ mm	/	/	/	/	/	/	85	75	75	75
高热稳定性 High temp Stability (200 °C /15min), ≥ mm	/	/	/	/	/	60	45	45	45	45

**性状:**  
Properties:

(S)<sub>n</sub> 是一种无毒、可燃的黄色粉末，因其不溶于二硫化碳而得名。它经普通硫磺热聚合制得，分子量大约30000，有高分子的粘弹性和分子量分布，因此也称弹性硫或聚合硫，属于无机高分子化工原料。

Insoluble Sulfur is a non-toxic inflammable yellow powder, and got this name because it can not dissolve in CS<sub>2</sub>. It is achieved through hot polymerization of common sulfur. Molecular weight about 30000, and it has the viscoelasticity and molecular weight distribution of macromolecules. So it is also called elastic sulfur or polymerized sulfur, and it belongs to the inorganic macromolecular chemical raw materials.

**用途:**  
Application:

不溶性硫磺，它主要作为一种橡胶工业的高级促进剂和硫化剂被广泛应用于轮胎及其它橡胶复合制品的生产制造中，诸如轮胎的胎体胶料、缓冲胶料、白胎制胶及翻胎、胶管、胶帘等橡胶与骨架材料粘合的胶料中，也可用于制造、胶鞋、油封、胶鞋等橡胶制品的胶料中，同时也应用于硫磺用最大量的浅色橡胶制品中。由于不溶性硫磺能使子午线、钢丝与橡胶粘得更牢固，有效的防止胶料喷霜，提高轮胎的耐热、耐磨性能。因此，不溶性硫磺是轮胎生产中必不可少的关键原料。

Insoluble Sulfur is mainly used as a super accelerator and vulcanizing agent in rubber industry, and is widely used in the production of tires and other rubber compounds. Such as in the materials made of rubber and frameworks, like casing, buffer layer, white wall tires and renewed tires, hose, and conveyor belt; materials like electric cable, rubber roll, oil seal, and rubbershoes; materials of light color with big consumption of sulfur in production. Because it's excellent performance in the adherence between radial cord/steel wire and rubber, and effective prevention of blooming, as well as reinforcing tire's endurance to heat and wear, Insoluble Sulfur is the essential material in the tire industry.

**包装:**  
Package:

牛皮纸复合袋内衬塑料膜，25kg/袋。或按客户要求。  
In kraft paper bag lined with plastic bag, 25kg/bag or at buyers' request.

## 预分散橡胶化学品产品目录 Pre-dispersion Rubber Chemicals Catalog

硫化剂 Vulcanizing Agent			
S-80	IS90-65	IS60-80	DTDM-80
			TCY-70
促进剂 Accelerator			
MBT-80	MBTS-75	MBTS-80	CBS-80
			TBBS-80
DCBS-80	OTOS-80	NOBS-80	DPG-80
			TMTD-80
TMTM-80	TETD-80	TBTD-80	DPPT-80
			DOTG-80
DETU-80	ETU-80	DFTU-80	TDEC-75
			ZDEC-80
ZDBC-80	ZDMC-80	ZBEC-80	ZEPC-80
			ZDTP-50
金属氧化物 Metal Oxide			
ZnO-80	MgO-75	TiO <sub>2</sub> -80	
防焦剂/防老剂 Scorch Retarder/Antioxidant			
CTP-80	MMBL-70	MBI-80	
发泡剂/消泡剂 Blowing Agent/Deicant			
AC-75	OBHSI-75	CaO-80	
黏合剂 Adhesion Agent			
R-80	HEXA-80	SIG-50	

注: 可根据客户要求生产不同载体 (EPDM, SBR, NBR 等)、不同含量 (50~80%)、不同剂型 (片状或颗粒) 的预分散橡胶产品。

Note: We can provide master batches especially according to customer's requirements or specifications, with different polymer binder (EPDM, SBR, NBR ect.), different content (50-80%) or different appearance (Granules or Stabs).

