

# VulcaPellet S-80(HD)

## 预分散台翔药胶 S-80(HD)

### PRE-DISPERSED POLYMER BOUND

#### COMPOSITION (成份)

An exclusive pre-dispersed 80% soluble rhombic sulfur in a 20% elastomeric\* (EPDM) / processing aids binder (elastomeric\* binder can be SBR or EPDM).

预分散 80%斜方晶硫于 20%橡胶弹性载体\*

\*橡胶弹性载体可选择 EPDM 或 SBR

#### PROPERTIES (物性)

Appearance/外观	Yellow granules/黄色颗粒
Specific Gravity/比重 (g/cm <sup>3</sup> )	Approx. 1.50
Volatility/挥发度 (80°C/2hr)	< 1.0 %
Mooney Viscosity/摩尼黏度 (ML 1+4 @ 50°C)	< 80
Storage Stability/储存期	Two year under normal storage conditions/ 在良好的保存环境下可保存两年
Packing/包装	25 kg per paper bag/25 公斤纸袋

#### RECOMMENDATIONS AND APPLICATIONS (应用范围及效果)

The dispersions of sulfur in NBR (Nitrile Rubber) compounds present well known challenges. Unlike other rubber processing utilizing mill operation, sulfur is recommended to be added at the initial step of mixing. An also common practice is to mix sulfur with NBR in an internal mixer (Banbury or Kneader). So, the operation technique and the temperature and mixing duration control in an internal mixer, need to be carefully articulated.

Taiwan R.O.C.

Tel : +886(49)2251015

Fax: +886(49)2251014

China (ShenZhen)

Tel : +86(755)27126057

Fax: +86(755)27126074

China (QingYuan)

Tel : +86(763)3105816

Fax: +86(763)3105818

NBR 配方中硫磺分散是橡胶工艺中的挑战。在目前 NBR 加工程序中，硫磺无法像其他胶种一样，在开炼机中添加，必须在密炼机中添加以达到所需的分散性。密炼机打料时间及温度必须谨慎的调整控制。

General speaking, the Banbury/Kneader mixing time needs to be adequately defined for a satisfied dispersion achievement. Too short mixing time cannot guarantee an optimal dispersion and, longer mixing time may provide the needed dispersion but at the risk and sacrifice of compound scorch. Further, sulfur tends to melt and re-crystallize under extended mixing at elevated temperature, which eventually may result in an inappropriate dispersion.

一般而言，万马力密炼需要一定的时间才能达到所需的硫磺分散。过短的密炼无法达到分散效果。过长的密炼无可避免的存有焦烧顾虑。同时，过长的密炼，硫磺也会因为温度升高溶解，形成再结晶集结。

Non-uniform dispersions create an imbalance in cure. The over cured areas may be the cause of premature cracking when subjected to the strain of flexing. The total use of the sulfur (optimal dispersion) for vulcanization provides a stronger overall product (better physical properties). Further, yellowish-brown stain appeared on the surface of rubber product (cosmetic effect) due to the poor dispersion, downgrades commercial value of white and pale colored products.

分散不良的硫磺会导致不均匀硫化。譬如，在过分硫化的区域里，硫化胶容易因外力扭曲形成微裂。

一般而言，均匀硫化分散不良的硫磺在表面的黄棕色斑点影响白色及浅色制品的美观及商品价值。

In this technical report, we compared the dispersion of our high dispersion sulfur PDPB (VulcaPellet®S-80HD) on a pure NBR compound with Rhenogran S-80 (Rhein Chemie, Germany). The brief experiment procedure description is here summarized. In a first step, the ingredients of the NBR master compound were pre-blended and milled on a two roll mill and then in a second step PDPB sulfur (VulcaPellet®S-80HD and Rhenogran S-80) were added on the mill. The final rubber compound was then press cured in a polished mold at 155°C as slabs format.

本技术报告比较台翔高分散药胶®S-80HD 与德国莱茵化学硫磺药胶在纯 NBR 配方中的分散性。简单的实验步骤整理如下。首先，在密炼机预混 NBR 配方后在滚轮中加入硫磺药胶。开炼后，在电热模压机 155°C 下硫化。

Uniformity of sulfur dispersion was observed by counting the number and magnitude of yellowish-brown stain (un-magnified visible sulfur) on a 4cm<sup>2</sup> surface of the cured slabs, showing the improved dispersion provided by VulcaPellet®S-80HD on NBR compounds over competitive product.

硫磺分散的均匀性以检测单位面积 ( 4cm<sup>2</sup> ) 硫化胶上黄棕色斑点为标准。显而易见的台翔高分散性硫磺 VulcaPellet®S-80HD 提供数量级改进的 NBR 硫磺分散。

### DOSAGE (使用剂量)

We recommend trying initially VulcaPellet®S-80 HD at 1:1 by weight in substitution of rhombic sulfur powder. Adjustments can be made according to actual effect. Dosage can be 0.3-3.0phr up to 55phr for ebonite.

使用预分散台翔药胶®S-80 HD 取代硫磺粉末时，建议先沿用粉末使用剂量，视效果再酌量增减。使用量应介于 0.3-3.0phr。硬质胶中的用量于可达 55phr。

### MANUFACTURER (生产厂商)

Foundry Chemical Inc. TaiXiang Rubber Division	台翔化工  台翔橡胶
LiSongLang Industrial Area, GongMing Town, ShenZhen, China	深圳市公明镇李松朗工业区
Phone: +86-755-27126057 Fax: +86-755-27126074 sales@foundrychemical.com.cn	

### IMPORTANT NOTE (备注)

TaiXiang has sought to correct the above information, the information and data for reference purposes only. Concrete information please keeps the standard of testing the kinds.

台翔公司对上述资料已力求正确，各项资料数据仅供参考，具体以实物检测为准。