

## VulcaPellet® SI-50

### 预分散台翔药胶® SI-50

#### PRE-DISPERSED POLYMER BOUND

### INHERITED DISADVANTAGES WITH LIQUID SI-69

#### （纯液体 Si-69 使用上的缺点）

Pure liquid Si-69 has only a restricted shelf life due to the reaction with moisture and loses activity. During the process, pure liquid Si-69 normally is used in small quantities and usually poured so rapidly into the rubber compound. The proposition is thus fraught with substantial uniformity problem.

纯液体-69 储存期短且易于水解而降低活性。小剂量操作时，常伴随着混炼不均匀的问题，因此耐磨效果存有极大的差异，使用剂量上无法准确计算。

### VULCAPELLET® SI-50 SOLUTION

#### （台翔耐磨剂药胶®的解决方案）

The advantages of VulcaPellet® SI-50 preparations, compared with liquid silanes, are safe and easy handling, fast and exact weighing, incorporation and dispersion, and nevertheless a strongly improved stability against humidity. The addition of

VulcaPellet<sup>®</sup>SI-50, unlike liquid silanes, can be either in internal mixers or on open mills. It offers flexibility according to individual process needs.

台翔药胶<sup>®</sup>SI-50。预分散纯液体 Si-69 于橡胶母粒中。成功的提高有效成份的安定性。操作时更能均匀地混入配方中，因此具备良好的分散性，操作性，及使用剂量的稳定性。除此之外，台药胶<sup>®</sup>SI-50 可依实际需要添加于前段密炼机或后段开炼机。

## DOSAGE REDUCTION TRANSLATES COST SAVING ADVANTAGE

（药胶使用剂量上的降低提供价格竞争力）

There is a significant dosage reduction on applying VulcaPellet<sup>®</sup>SI-50. The test results indicate that a weight ratio around 1 (liquid coupling agents, Si-69) to 1.3 (pre-dispersed coupling agents VulcaPellet<sup>®</sup>SI-50) would generally yield an equivalent effectiveness even though VulcaPellet<sup>®</sup>SI-50 is a masterbatch with 50% active ingredient Si-69. This would translate a big cost saving advantage since there is no need to double the dosage to obtain a good abrasion index.

台翔耐磨剂药胶<sup>®</sup>可降低大手料操作时的使用剂量。根据实验结果，50%有效成份的台翔耐磨剂药胶<sup>®</sup>，在用量上仅需纯液体 Si-69 1.3 倍，远低于两倍的理论使用值，便可达到相同的耐磨系数。实际使用台翔耐磨剂药胶<sup>®</sup>剂量上的降低提供价格竞争力。

## AGREAT POTENTIAL GROWTH AHEAD

（台翔耐磨剂药胶<sup>®</sup>发展潜力看好）

There would be a tremendous need to replace liquid coupling agents with VulcaPellet<sup>®</sup> SI-50, which provides:

- Better shelf life.
- Better dispersion.
- Lower dosage.
- Easy handling.

In addition, the quality and cost effective solution it provides will play catalytically on the substitution process.

台翔耐磨剂药胶<sup>®</sup>有取代传统纯液体耐磨剂的趋势,它的优点包括:

- 较长的储存期
- 良好的分散性
- 较低的使用剂量
- 操作方便

除此之外,物美价廉的台翔耐磨剂药胶<sup>®</sup>能帮助业者加快替换的速度。

## COMPOSITION (成份)

An exclusive pre-dispersed 50% Bis - [3 - (Triethoxysilyl) propyl] - Tetrasulphide in a 50% elastomeric\* / processing aids binder (elastomeric\* binder can be SBR or EPDM).

预分散 50%双-[3-(三乙氧基硅)-丙基]四硫化合物硅烷偶联剂 (耐磨剂) 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	Translucent yellow granules 透明淡黄米色颗粒
Specific Gravity (g/cm <sup>3</sup> ) 比重	Approx. 1.20
Mooney Viscosity (ML 1+4 @50°C) 摩尼黏度	≤ 25
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 in paper bag. 25 公斤纸袋

**Note:** This product is characterized with minor change of color and volatilization; the content may slightly loss its weight, depending on the ambient environment and the period of storage. This phenomenon will not affect the designated chemical performance of this product in most cases. These changes can be prevented if this product is to be used in short period after purchasing.

**注 意:**此产品放置一段时间后,产品颜色会有变化并有挥发现象,以致其重量会有少量减轻,其为产品本身的特性,产品品质不变。如果在购买短时间内使用,则可避免其现象的发生。

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

Pre-dispersed VulcaPellet®SI-50(TBBS-50)) is recommended where high productivity, better dispersion and a more eco-friendly environment are required. This often translates to a lower bottom-line costing.

预分散台翔药胶®SI-50 提升操作现场符合环保要求。同时提供更好的分散性及更宽广的兼容性。其良好的加工性能能增进生产效率降低成本。

The active ingredient of VulcaPellet®SI-50, Si-69 is a bifunctional, sulfur-containing organosilane used in the rubber industry in combination with white fillers that carry silanol groups. It reacts with fillers containing silanol groups during mixing and with the polymer during the vulcanization process under formation of covalent chemical bonds. This imparts better tensile strength, higher modules, reduced compression set, increased abrasion resistance and optimized dynamic properties. Si-69 is used in many applications where white fillers containing silanol groups are involved and optimum technical properties are required. The dramatic reducing of Mooney viscosity and the flow property improvement of rubber can be observed after adding Si-69 during the milling processing. So it becomes one of idea processing additives.

台翔药胶® SI-50 的有效成份 Si-69 是一种液体的含硫硅烷偶联剂。含双官能基的硫硅烷偶联剂分子具备能够水解的烷氧基和有机硫基。烷氧基在混炼混合时与白烟表面的硅醇基缩合形成硅氧烷键。有机硫基则与橡胶于硫化时形成共价键结。添加该系列硅烷偶联剂的效果表现在橡胶制品的物理机械性能 (300%定伸强度, 耐磨强度, 永久变形下降) 得到显著的改善。在橡胶的混炼过程中加入硅烷偶联剂以后, 胶料的摩尼粘度明显降低, 硫变性能提高, 故而也是一种理想的加工助剂。

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## DOSAGE (使用剂量)

We recommend trying initially VulcaPellet® SI-50 By weight in substitution of TBBS powder .Adjustments can be made according to actual effect.The dosage can be 0.5 - 2.0phr.

使用预分散台翔药胶® SI-50 取代纯液体 Si-69 时,建议先沿用纯液体使用剂量。

视效果再酌量增减.使用量常介于 0.5 到 2.0phr.。

## MANUFACTURER (生产厂商)

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## IMPORTANT NOTE (备注)

Tai Xiang has sought to correct the above information, The information and data for reference purposes only. Concrete information please keep 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。