

VulcaMix® #4-GR

台翔 4 号促进剂®

PRE-DISPERSED POLYMER BOUND

PRODUCT DESCRIPTION (产品特性)

VulcaMix® #4-GR is the best in class QUV4.5 light fastness accelerator with the highest processing safety. It precludes the sources of all carcinogenic N-nitrosamines, and do so without causing blooming problem. Rubbers cured with VulcaMix® #4-GR are with best cure characteristics and superior physical properties. VulcaMix® #4-GR comes with the pre-dispersed polymer bound form for better handling and dustless work environment.

台翔 4 号促进剂®是橡胶界最好的耐黄及安全焦化性能的促进剂。在硫化过程中不产生致癌的亚硝酸胺又可降低硫化胶吐霜的发生。台翔 4 号促进剂®产品形态为预分散母胶粒，操作性良好，无粉尘污染。

ADVANTAGES (产品优势)

- Best-in-class light fastness accelerator with low risk of scorch
- Good QUV light fastness grade 4.5-5.0
- Desirable curing curve with superior vulcanizates properties

- No formation of carcinogenic nitrosoamine
- Minimize blooming, no staining
- Pre-dispersed polymer bound form for better handling and dustless working environment
- Pre-dispersed polymer bound form for fast incorporation and easy dispersion
- 橡胶界最好的耐黄及安全焦化性能促进剂
- QUV 耐黄测试可达 4.5 至 5.0 级要求
- 安全操作的硫化时间及优良的硫化胶物理性能
- 硫化过程中不产生致癌的亚硝胺
- 降低硫化胶吐霜的发生，无色污染
- 预分散母胶粒操作性良好，易于量测，无粉尘污染
- 预分散母胶粒混合迅速，分散良好

RECOMMENDATIONS AND APPLICATIONS (应用范围及效果)

Vulcanizates cured with conventional accelerator system based upon MBT/MBTS (M/DM) suffers a color fading, yellowing, darkening or even physical degradation such as cracking or shrinking when exposed to the sunlight. Dithiophosphate (KE7699 Bayer®) and dithiocarbamate (EZ, BZ, PZ) accelerators were first suggested because of their good anti-yellowing property. Nevertheless, the use of these so call ultra accelerators presents a poor processing safety. In addition, recent studies have shown that secondary amines from dithiocarbamate accelerators (EZ, BZ, PZ) are split off during the vulcanization. They can form nitrosoamine under environmental condition, which seems to be human

carcinogenic.

传统使用 DM 促进系统硫化的硫化胶曝露于日光的照射下容易褪色，老化黄变进而影响制品的外观和物理机械性能。超速促进剂的硫代磷酸盐促进剂 (KE7699 Bayer®) 与硫代氨基甲酸盐促进剂 (EZ, BZ,PZ) 虽具有优良的耐黄特性，但存在着操作不安全性。近期研究更发现硫代氨基甲酸盐促进剂 (EZ, BZ,PZ)在硫化过程中会产生致癌的亚硝胺。

There were attempts in improving the processing safety on these ultra accelerators by the use of slower accelerators like MBTS (DM) and TBBS (NS). These delay action accelerators retard the vulcanization only to some extent and it does not improve much on the storage time nor have enough processing safety. Worst of all, the light fastness degrades with the addition of these slower accelerator.

业界尝试在配方中添加中慢速二次促进剂或延迟剂以提升超速促进剂的操作安全性。添加中慢速的二次促进剂虽然可以延迟硫化时间，却无法有效解决混合胶料的贮存期及控制硫化时间的稳定性，同时耐黄等级也会随之下降。

VulcaMix® #4-GR was developed to meet the emerging need from rubber industry as a new generation accelerator system, which optimizes between a good light fastness and processing safety. It not only precludes the sources of all carcinogenic N-nitrosoamines, but also it achieves this without causing blooming problem.

台翔 4 号促进剂®据橡胶工业需求所研发，具有安全的硫化操作性及良好的耐黄性能。

台翔 4 号促进剂®符合现场生产操作的环保要求，无毒无污染在硫化过程中不产生致癌物亚硝胺。

VulcaMix® #4-GR achieves a grade level of 4.5-5.0 from QUV light fastness test yet with a great processing safety. The curing of VulcaMix® #4-GR provides a considerably long scorch time and a fast full cure. In addition, the compounded material can be stored with extended time without the scorch so that a better production logistics can be observed.

使用台翔 4 号促进剂®可在优良的操作安全性下达到 QUV 耐黄变测试 4.5-5.0 级，焦化时间长、硫化速度快、操作安全性高，同时混炼胶具有延长的储存期，便于现场生产管制。

DOSAGE (使用剂量)

Approx. VulcaMix® #4-GR 2-2.5phr in rubber composition. by adding 0.05-0.15phr VulcaPellet® TS-80 (or VulcaPellet® TBzTD-80 for nitrosamine free) vulcanization can be further accelerated and cross-linking yields increased.

于浅色胶料中加入大约 2-2.5phr台翔4号促进剂®做为主促进剂，加入0.05-0.15phr台翔药胶® TS(TMTM)-80 (或台翔药胶® TBzTD-80)做为二次促进剂，能加快硫化速度，

同时架桥密度会大幅增加。

PROPERTIES (物性)

Appearance 外观	Grey granules 灰色颗粒
Specific Gravity (g/cm ³) 比重	Approx. 1.25
Mooney Viscosity (ML 1+4 @ 50°C) 摩尼黏度	< 110
Storage Stability 储存期	A half of year under normal storage condition. 半年于良好保存环境
Packing 包装	25kg in paper bag 25 公斤纸袋

Note: This product is characterized with minor change of color, 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. Color change 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, 产品颜色会有所变化, 其为产品本身的特性; 在绝大部份情况, 产品品质不变。如果在购买后短时间内使用, 则可避免颜色改变。

NOTE

VulcaMix#4-GR, when used in excess amount, the cured rubber soles tends to turn yellow on the areas touched by the sweating hands. This color change usually fades away in a few days. By combining VulcaMix#4-GR and VulcaMix#2-GR (VulcaMix#1-GR), the touched yellowing can be greatly minimized if not totally avoided.

备注

当使用台翔四号促进剂过量时, 白色硫化橡胶底容易会有汗手接触变黄的情况. 通常这种变黄是暂时性的, 隔一段时间便会渐渐消退. 适量以台翔二号促进剂 (台翔一号促进剂) 取代台翔四号促进剂也可以有效的降低(解决)手汗变黄的严重性.

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。