

绿色创新让城市生活更美好

Green innovation makes city life better

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三棵树名片

3 Trees's Card



让家更健康，让城市更美丽
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- 惟精惟专，第一家**主板上市**的民用涂料企业；

Proficient and specialized, the first civilian paint business **listed shares on the main board**;

- 曾连续七年销量翻番，中国民用涂料**前三位**；

Doubled sales for 7 consecutive years once, **top 3** civilian paint in China;

- 2016年品牌价值排名**288位**，达到**125.27亿元**；

Brand value ranked **288** in 2016, reaching **12.527 billion yuan**;

- **百强地产战略合作伙伴**；

Strategic partner with Top 100 estate;

- 企业占地**30万平方米**，全球最大水性涂料基地之一，年产能超过**50万吨**；

The total area of our company is **300 thousand** square meters, one of the world's largest water-based paint base with an annual capacity of more than **500,000 tons**;

三棵树名片

3 Trees's Card



让家更健康，让城市更美丽
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- 首倡“健康漆”概念，神六、神七搭载品牌；
Advocating the concept of “health paint” firstly, Shenzhou VI and VII spacecraft carrying brand;
- 家装：“健康+”新品各项健康指标引领行业（让家更健康）；
Family renovation: the health indicators of new “health +” products leading the industry (make home healthy)
- 工程：科技、节能、品味、自然（让城市更美丽）；
Engineering: technology, energy saving, taste, nature(make city beautiful)
- 5大国家级研发平台，4大生产基地；
5 major national R&D platform, 4 large production base;
- 每年5万人参观企业，两任总理认可与称赞...
50,000 people visit the enterprise every year, recognized and praised by two prime minister.

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涂料生产过程给人印象：脏、乱、差

Impressive of paint production process to people: dirty, messy, poor



产生粉尘、废水、废桶等各种废弃物
Produce dust, waste water, waste barrels and other waste

绿色生产 Green production

设计方案
Design

绿色生产过程
Green production process

管理模式
Management mode

实现目的
Achieved goals

创新设计思路innovative design ideas

先进的工艺技术advanced technology

先进的生产设备advanced production equipment

清洁能源、原料clean energy, raw materials

源头治理，实现零排放source management, to achieve zero emissions

提升资源利用效率，尤其是废弃物再利用improving resource use efficiency, especially waste recycling

采用清洁能源，降低能源损耗

Using clean energy, reducing energy consumption

提高全员清洁生产意识 improving the awareness of all employees clean production

加强资源再利用力度

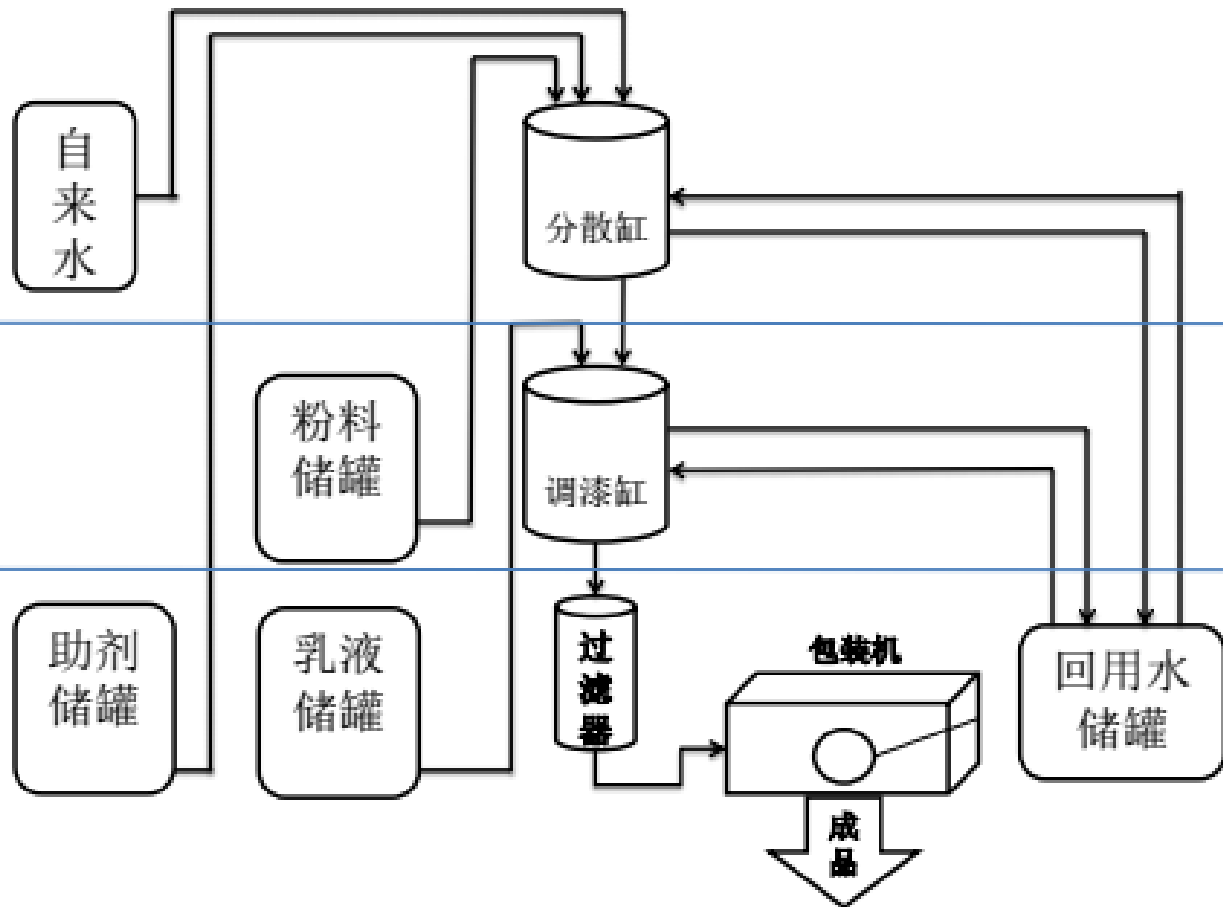
strengthen the reuse of resources

脱离老旧管理模式out of old management mode

减少消除污染物产生、排放

reducing and eliminating pollutant generation and discharge

实现循环经济生产，满足可持续发展需要
Achieving circular economy production, meeting the needs of sustainable development



三楼

二楼

一楼

- 粉料、乳液、助剂全部采用储罐直接输送的形式进料，杜绝了投料过程造成的包装物、泄露所造成的污染；
All powder, emulsions, additives using in the form of direct transport of the tank, put an end to the packaging process caused by the packaging, leakage caused by pollution;
- 生产清洗环节所产生的废水、废料重新回用，避免废弃物排放对环境造成的污染；
The waste water, and waste generated in the Production of cleaning links are reused, to avoid waste emissions pollute the environment.

| 单位 Unit | | 产品指标单位 Product indicator unit | 三棵树 3 Trees | 普通企业 Ordinary enterprise |
|--|----------------------------|---|--------------|-----------------------------|
| 单位产品耗水量 Water consumption | | 吨/单位产品 ton/unit product (wt) | 4015 | 4761 |
| 单位产品综合能耗 Integrated energy consumption | | 吨标煤/单位产品 ton standard coal/unit product (wt) | 18 | 18 |
| 单位 产品 主要 污染 物产 生量 Mainly pollutant production of unit product | 废水量 Waste water | 吨/单位产品 ton/unit product (wt) | 761 | 1645 |
| | 一般固废 Generally solid waste | 吨/单位产品 ton/unit product (wt) | 2.150 | 5.004 |
| | 危险废物 Hazardous waste | 吨/单位产品 ton/unit product (wt) | 3.034 | 8.902 |
| | 二氧化硫 Sulfur dioxide | 吨/单位产品 ton/unit product (wt) | —— | —— |
| | 氮氧化物 Nitrogen oxides | 吨/单位产品 ton/unit product (wt) | —— | —— |
| | 烟尘 Soot | 吨/单位产品 ton/unit product (wt) | —— | 0.051 |
| 单位 产品 主要 污染 物排 放量 Mainly pollutant discharge of unit product | 废水量 Waste water | 吨/单位产品 ton/unit product (wt) | 213 | 1645 |
| | 一般固废 Generally solid waste | 吨/单位产品 ton/unit product (wt) | 0 | 0 |
| | 危险废物 Hazardous waste | 吨/单位产品 ton/unit product (wt) | 0 | 0 |
| | 二氧化硫 Sulfur dioxide | 吨/单位产品 ton/unit product (wt) | —— | —— |
| | 氮氧化物 Nitrogen oxides | 吨/单位产品 ton/unit product (wt) | —— | —— |
| | 烟尘 Soot | 吨/单位产品 ton/unit product (wt) | —— | 0.051 |

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自清洁、保色、耐候、耐水、耐水白（三耐）

Self cleaning, color retention, weatherability, water resistance and water whitening (3 resistance)

三棵树墙清霾净系列产品

3 Trees's photocatalysis self-cleaning series products

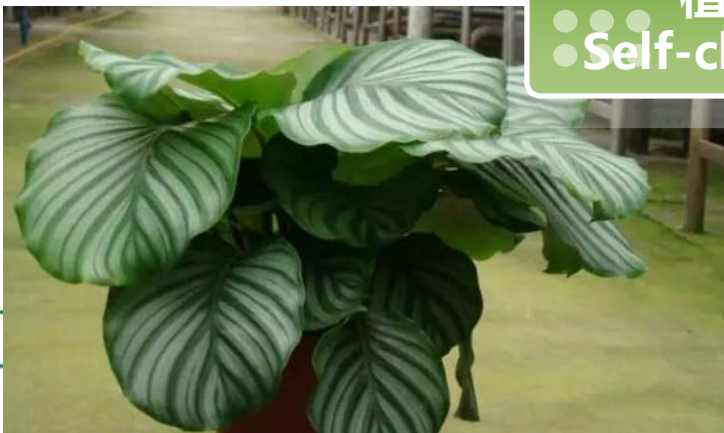
墙清霾净系列产品是通过Pickering乳液技术研制而成，不仅具有自清洁、耐候保色功能，还具有一般罩面清漆的所有功能如耐水、耐水白、粘结力等。

The photocatalysis self-cleaning series products are developed by Pickering emulsion technology, which not only having self-cleaning, color retention, but also having all performance of general waterborne finishing varnish ,such as water resistance, water whitening, and bonding performance.





●●● 瓷砖、石材的耐候、保色性
●●● Color retention of tiles and stone



●●● 植物般的自清洁功能
●●● Self-cleaning liking plants

外墙涂理想状态
Ideal for
exterior
wall coating

使用对比——耐候保色、抗污洁净

Using contrast---color retention, stain resistance

弹性平涂（16个月）

Elastomeric coatings (16 months)



真石质感（10个月）

Sand textured building coating (10 months)



健康+新标准LOGO: Health + new standard logo



4月份上市，截止12月份，单系列产品销量超过2亿
Listed in April, as of December, single series of
products sold more than 200 million

企业乳胶漆健康+新标准:

- 1、VOC: ≤ 10 g/L, 为国标指标的1/12, 为“环境保护标准”指标的1/5。
- 2、游离甲醛: ≤ 5 mg/kg, 达到食品级标准, 约为国标指标的1/20, 约为“环境保护标准”指标的1/10。
- 3、苯、甲苯、二甲苯、乙苯均未检出。
- 4、重金属: 国家仅对4类重金属进行管控, 三棵树新标准达到11类, 且限量标准优于国标、欧标、美标。
- 5、气味控制: 根据美国ASTM E544规范, 参照汽车内饰零部件材料气味检测方法, 制定了目前行业内还没有的气味判定标准, 气味消散时间8小时以下。

注: 以上数据是基于企标“Q/SKSP 022 水性净味环保涂料”进行测试

Enterprise emulsion paint health+ new standard:

- 1、VOC: ≤ 10 g/L, is one-twelfth of the national standards, is one-fifth of the environmental protection.
- 2、Free formaldehyde: ≤ 5 mg/kg, reaching food grade standards, is about one-twentieth of the national standards, is one-tenth of the environmental protection
- 3、Benzene, toluene, xylene and ethylbenzene are all not detected.
- 4、Heavy metal: our country only controls four types of heavy metals, 3 Trees new standard reaches 11 categories, and the limited value is lower than the national standards, the EU standards and US standards.
- 5、Order control: According to the US ASTM E544 standard, with reference to the automotive interior parts material odor detection method, developed the current industry has not yet identified the smell of the standard, odor dissipation time of 8 hours or less.

Remarks: the above data is based on the enterprise standard “Q/SKSP 022 water-based environmental protection paint” for testing.

健康+新标准LOGO: Health + new standard logo



4月份上市，截止12月份，单系列产品销量超过2亿
Listed in April, as of December, single series of
products sold more than 200 million

企业水性木器漆健康+新标准:

- 1、VOC: ≤ 45 g/L, 远低于国标, 比“环境保护标准”更严苛。
- 2、游离甲醛: ≤ 10 mg/kg, 约为国标指标的1/10, 约为“环境保护标准”指标的1/10。
- 3、苯、甲苯、二甲苯、乙苯均未检出。
- 4、重金属: 国家仅对4类重金属进行管控, 三棵树新标准达到11类, 且限量标准优于国标、欧标、美标。
- 5、气味控制: 根据美国ASTM E544规范, 参照汽车内饰零部件材料气味检测方法, 制定了目前行业内还没有的气味判定标准, 气味消散时间8小时以下。

注: 以上数据是基于企标“Q/SKSP 022 水性净味环保涂料”进行测试。

Enterprise water based coating for woodenware health+ new standard:

- 1、VOC: ≤ 45 g/L, far below the national standard, more stringent than the environmental protection.
- 2、Free formaldehyde: ≤ 10 mg/kg, is about one-tenth of the national standards, is one-tenth of the environmental protection
- 3、Benzene, toluene, xylene and ethylbenzene are all not detected.
- 4、Heavy metal: our country only controls four types of heavy metals, 3 Trees new standard reaches 11 categories, and the limited value is lower than the national standards, the EU standards and US standards.
- 5、Order control: According to the US ASTM E544 standard, with reference to the automotive interior parts material odor detection method, developed the current industry has not yet identified the smell of the standard, odor dissipation time of 8 hours or less.

Remarks: the above data is based on the enterprise standard “Q/SKSP 022 water-based environmental protection paint” for testing.

| 指标 index | | 国标有害物质限量 National standard harmful substances limited | 环境保护标准 Environmental protection standards | 欧盟标准 EU standards | 美国标准 US standards | 三棵树健康+内墙乳胶漆标准 3 Trees's health+ interior emulsion paint standard |
|---|-------------------------------------|--|--|----------------------|----------------------|---|
| VOC/g/L | | ≤120 | ≤50 | / | / | ≤10 |
| 游离甲醛 free formaldehyde/(mg/kg) | | ≤100 | ≤50 | / | / | ≤5 |
| 苯、甲苯、二甲苯、乙苯的总量/(mg/kg) Total amount benzene, toluene, xylene, ethylbenzene | | ≤300 | ≤100 | / | / | 未检出(检出限50mg/kg) Not detected (check out 50mg/kg) |
| 可溶性重金属 (mg/kg) Soluble heavy metals | 铅 Pb | ≤90 | ≤90 | ≤160 | ≤90 | ≤10 |
| | 铬 Cr | ≤60 | ≤60 | ≤460 | ≤60 | ≤20 |
| | 镉 Cd | ≤75 | ≤75 | ≤17 | ≤75 | ≤17 |
| | 汞 Hg | ≤60 | ≤60 | ≤94 | ≤60 | ≤10 |
| | 六价铬 Cr ⁶⁺ | / | / | ≤0.2 | / | ≤0.2 |
| | 锑 Sb | / | / | ≤560 | ≤60 | ≤60 |
| | 砷 As | / | / | ≤47 | ≤25 | ≤25 |
| | 有机锡 inorganic Sn | / | / | ≤12 | / | ≤12 |
| | 钴 Co | / | / | ≤130 | / | ≤100 |
| | 镍 Ni | / | / | ≤930 | / | ≤100 |
| 硒 Se | / | / | ≤460 | ≤500 | ≤100 | |
| 气味控制 odor control | 气味判定/级气味判定/级 odor judgment/level | / | / | / | / | ≤1 |
| | 气味消散时间/h Odor dissipation time/h | / | / | / | / | ≤8 |

1、VOC：≤10 g/L，为国标指标的1/12，为“环境保护标准”指标的1/5。

2、游离甲醛：≤5 mg/kg，达到食品级标准，约为国标指标的1/20，约为“环境保护标准”指标的1/10。

3、苯、甲苯、二甲苯、乙苯均未检出。

4、重金属：国家仅对4类重金属进行管控，三棵树新标准达到11类，且限量标准优于国标、欧标、美标。

5、气味控制：根据美国ASTM E544规范，参照汽车内饰零部件材料气味检测方法，制定了目前行业内还没有的气味判定标准，气味消散时间8小时以下。

1、VOC：≤10 g/L, is one-twelfth of the national standards, is one-fifth of the environmental protection.

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| 指标 index | 国标有害物质限量National standard harmful substances limited | 环境保护标准Environmental protection standards | | 儿童房装饰用水性木器标准 water based coatings for woodenware for children's room decorating standard | | 欧盟标准 EU standards | 美国标准 US standards | 三棵树健康+室内装饰用水性器漆标准 3 Trees's health+ water based coatings for woodenware for indoor decorating standard |
|--|--|--|------------------|--|-------------------|-------------------|-------------------|--|
| | 涂料 coating | 清漆varnish | 色漆colorful paint | 清漆varnish | 色漆 colorful paint | | | 清漆varnish 色漆 colorful paint |
| VOC/g/L | ≤300 | ≤80 | ≤70 | ≤80 | ≤70 | / | / | ≤45 |
| 游离甲醛 free formaldehyde/(mg/kg) | ≤100 | ≤100 | | ≤100 | | / | / | ≤10 |
| 苯、甲苯、二甲苯、乙苯的总量/(mg/kg) Total amount benzene, toluene, xylene, ethylbenzene | ≤300 | ≤100 | | / | | / | / | 未检出(检出限50mg/kg) Not detected (check out 50mg/kg) |
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| | 铬 Cr | ≤60 | ≤60 | ≤60 | ≤60 | / | ≤60 | ≤20 |
| | 镉 Cd | ≤75 | ≤75 | ≤75 | ≤75 | ≤17 | ≤75 | ≤17 |
| | 汞 Hg | ≤60 | ≤60 | ≤60 | ≤60 | ≤94 | ≤60 | ≤10 |
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| | 锑 Sb | / | / | / | ≤60 | ≤560 | ≤60 | ≤60 |
| | 砷 As | / | / | / | ≤25 | ≤47 | ≤25 | ≤25 |
| | 有机锡 inorganic Sn | / | / | / | / | ≤12 | / | ≤12 |
| | 钴 Co | / | / | / | / | ≤130 | / | ≤100 |
| 镍 Ni | / | / | / | / | ≤930 | / | ≤100 | |
| 硒 Se | / | / | / | ≤500 | ≤460 | ≤500 | ≤100 | |
| 气味控制 odor control | 气味判定/级 odor judgment/level | / | / | / | / | / | / | ≤1 |
| | 气味消散时间/h Odor dissipation time/h | / | / | / | / | / | / | ≤8 |

1、VOC: ≤45 g/L, 远低于国标, 比“环境保护标准”更严苛。

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三 棵 树 下 健 康 人 家
Three Trees Healthy Home

Thanks!

