

valspar

if it matters, we're on it.®



威士伯绿色环保涂料

段刚博士

威士伯亚太技术总监

September 2012



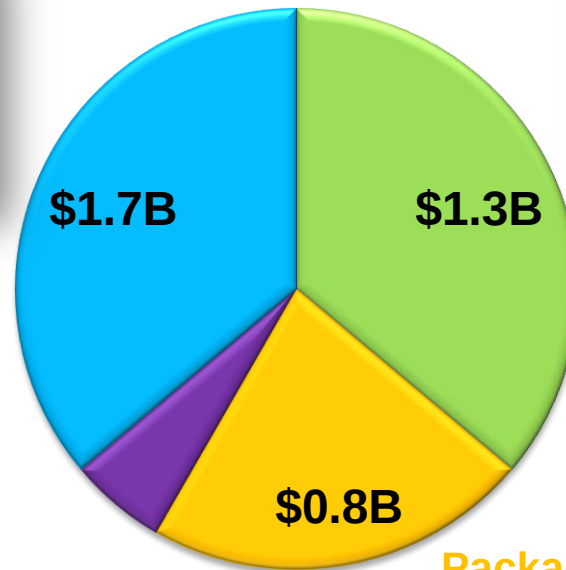
Valspar 威士伯生意一览

2011 销售总额：40亿美元

Consumer Paints (\$1.7B)



Industrial Coatings (\$1.3B)



Other (\$0.2B)

Packaging Coatings
(\$0.8B)

全球第五大涂料公司



威士伯旗下所拥有的品牌：

Legacy of Strong Brands



wattyl®



Huarun
华润涂料
漆业真专家

valspar®



G
GUARDSMAN®
EXCELLENCE IN FURNITURE CARE
SINCE 1915

DE BEER
REFINISH

PlastiKote®
THE PERFECT FINISH™



valspar®
AQUAGUARD™

威士伯在中国



威士伯全球研发中心



广州顺德

研发中心办公楼



研发中心图书馆



研发中心大礼堂



研发中心办公区



PENTAX K20D F3.5 1/30s ISO200

国际化的一流实验室



产品展示厅

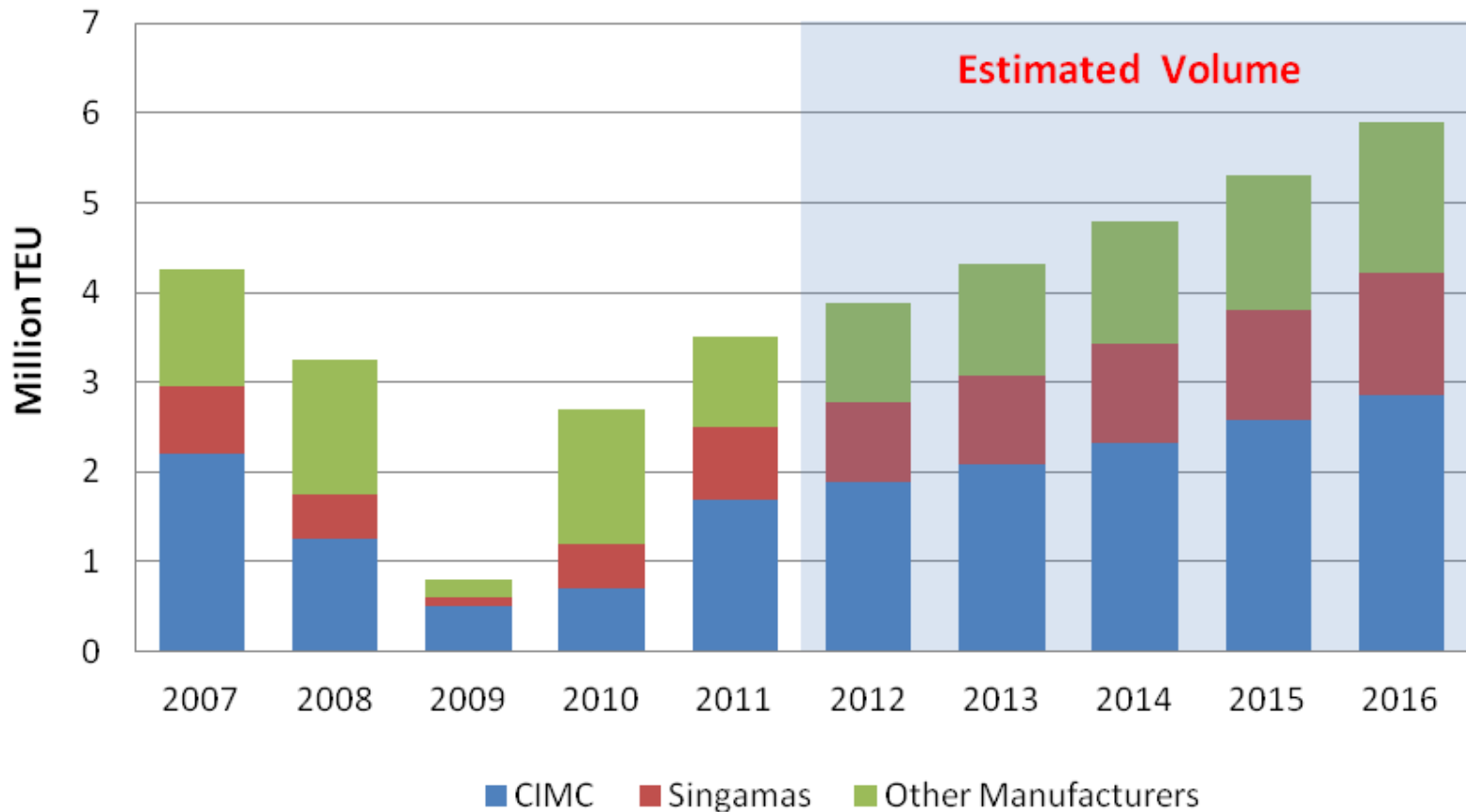




Industrial Coating: 工业涂料:

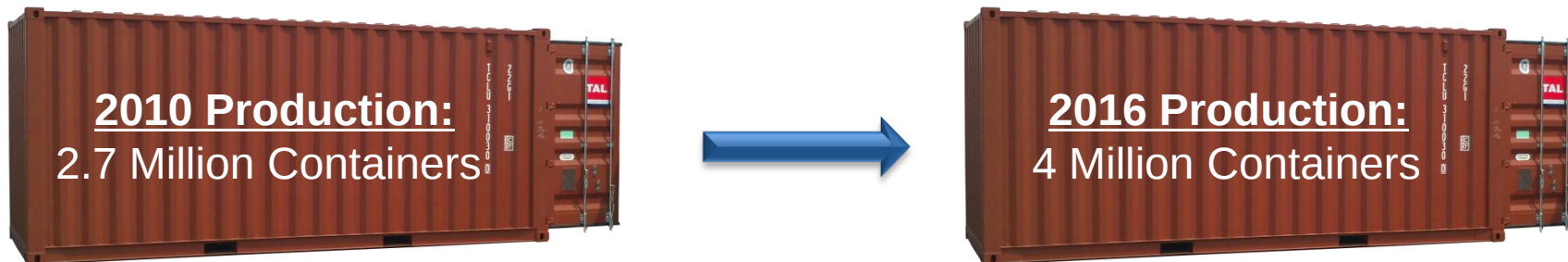


Shipping Container Outlook



Source: Alphaliner Market Update Report

Shipping Container Outlook



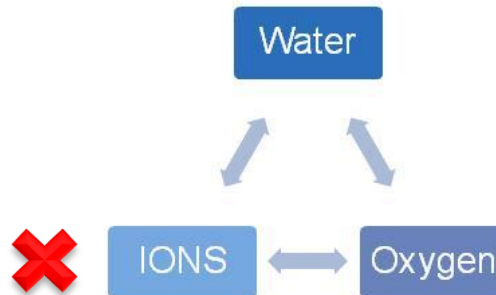
Coating	2010	2016	VOC per Container
Solvent	141,000,000kg	208,800,000kg	52.2kg
Aquaguard	3,000,000kg	4,400,000kg	1.1kg

Zinc Free Performance

Zinc Coating Systems

- To stop corrosion, zinc based coatings remove the Ion potential
- To accomplish the removal, the Zinc “sacrifices” itself, degrading, to slow the rusting process
- The “sacrifice” produces a larger rust area than waterborne solutions

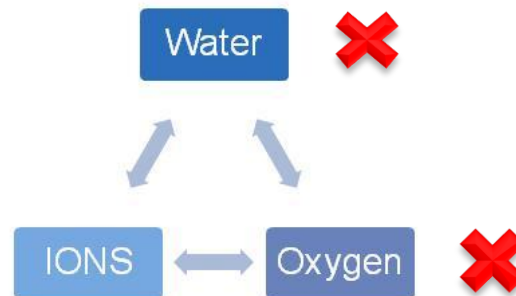
Elements of Corrosion



Valspar Aquaguard™ Solution

- Prevents water from reaching the surface to mix with Oxygen
- Prevents Oxygen from reaching the metal
- Performs without “sacrificing” itself, holding corrosion to smaller area

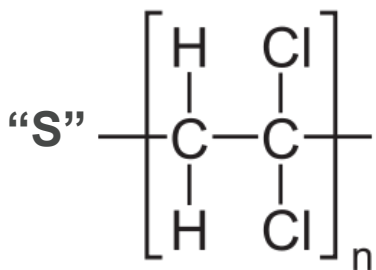
Elements of Corrosion



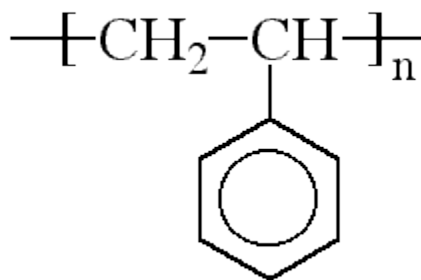
Why You Don't Need Zinc?

Resin	Oxygen (g*mil/(100 in2*day)	Nitrogen (g*mil/(100 in2*day)	Carbon Dioxide (g*mil/(100 in2*day)
SPVDC Polymer	0.12 - 0.16	0.04 - 0.4	0.4 – 2.0
Polystyrene	2400 - 3200	160 - 200	8,000 - 12,000
Polypropylene	1200	240	4800

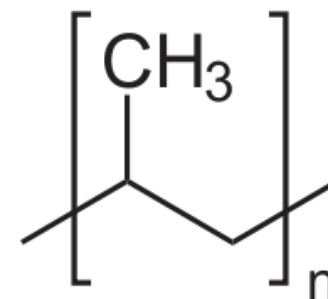
**Kirk-Othmer: Encyclopedia of Chemical Technology, Forth Editions, Vol. 24 NY*



SPVDC



Polystyrene



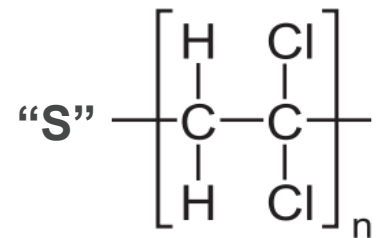
Polypropylene

Why You Don't Need Zinc?

Valspar's Aquaguard™ coating system protects the metal substrate better than conventional zinc systems by:

- Preventing initiation of corrosion by being an effective barrier to water and oxygen from reaching the substrate
 - The SPVD base resin is impermeable to a wide variety of gases due to a combination of high degree of crystallinity and high density
- Providing superior adhesion of the primer to the substrate and the top coat to the primer
 - The coating top coat and primer are designed to work together – surface energy, solubility parameters, application process

SPVDC

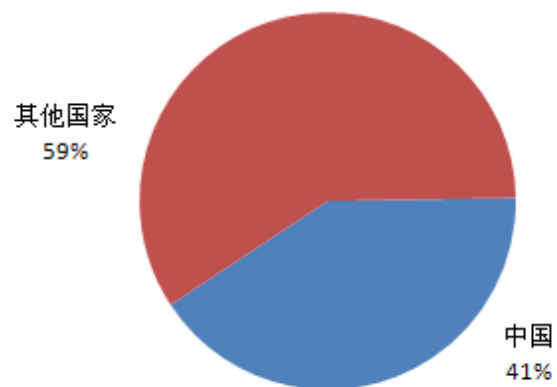


Wood Coating: 木器涂料:

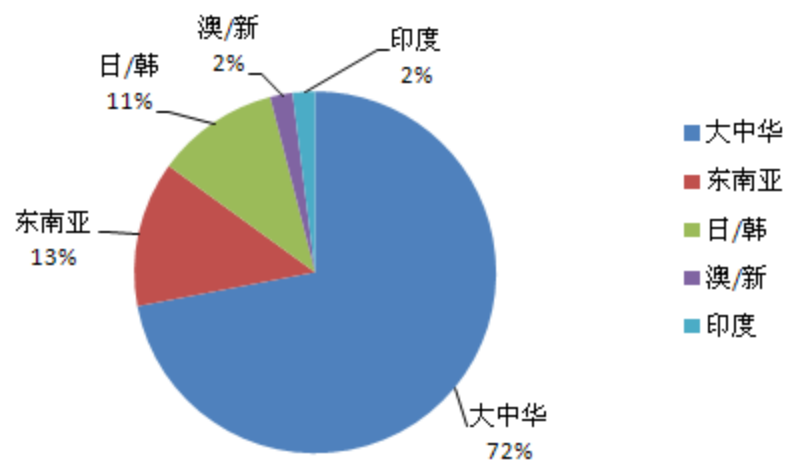


木器涂料市场

2009年全球木器涂料需求总量1,950KMT

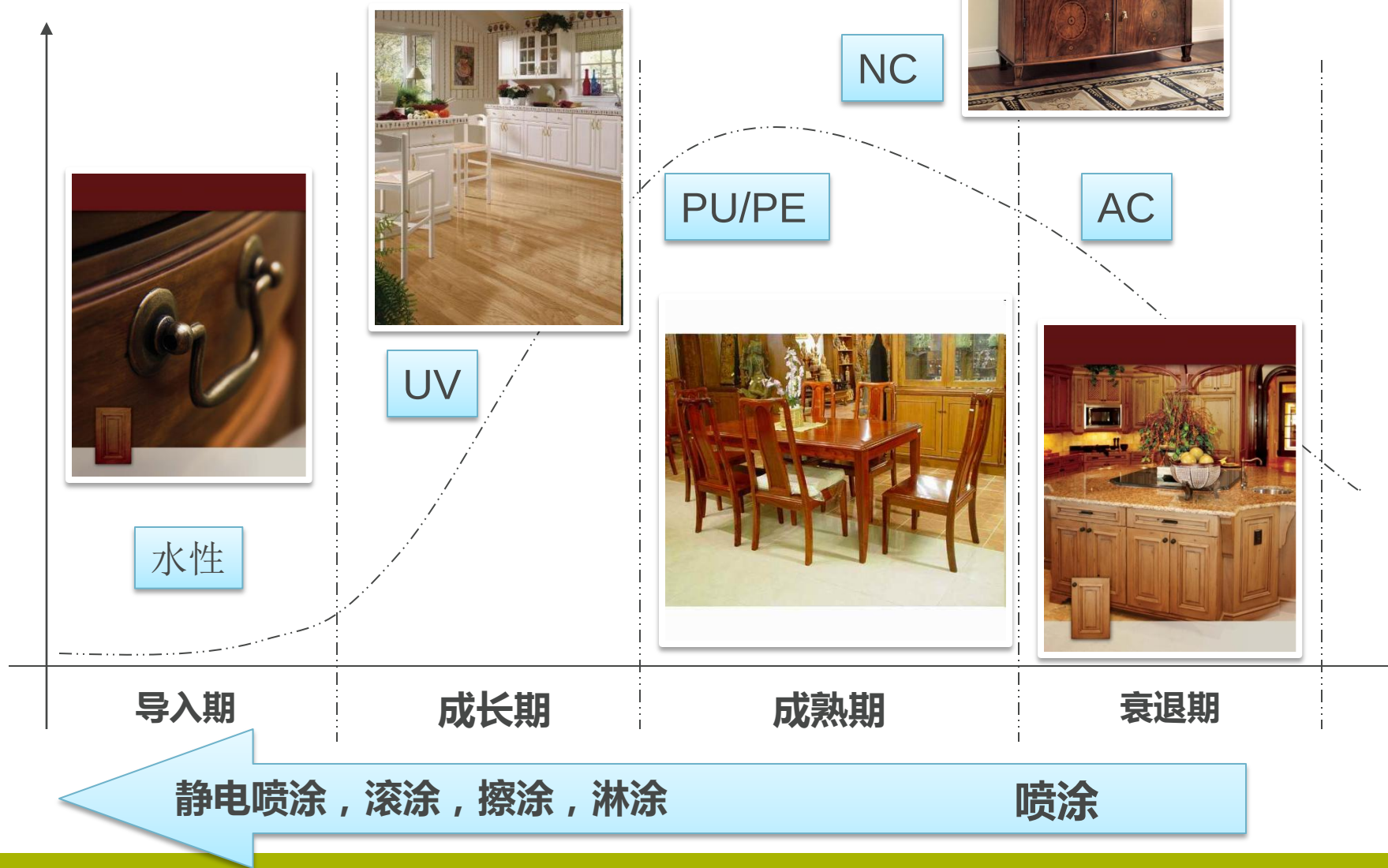


亚洲木器涂料销售额\$3.3 billion-a



2008年Frost & Sullivan Asian木器涂料报道

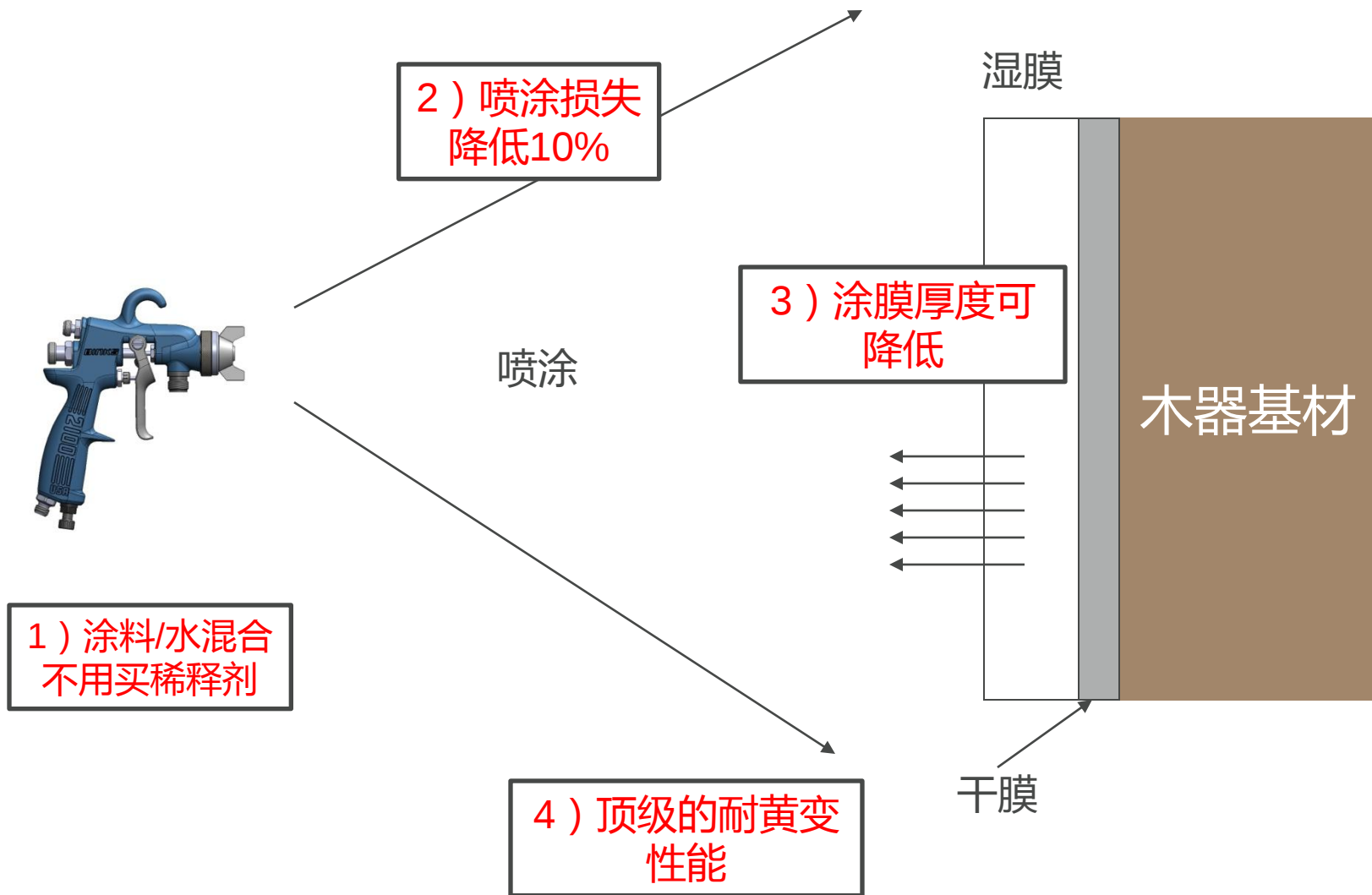
木器涂料技术概览



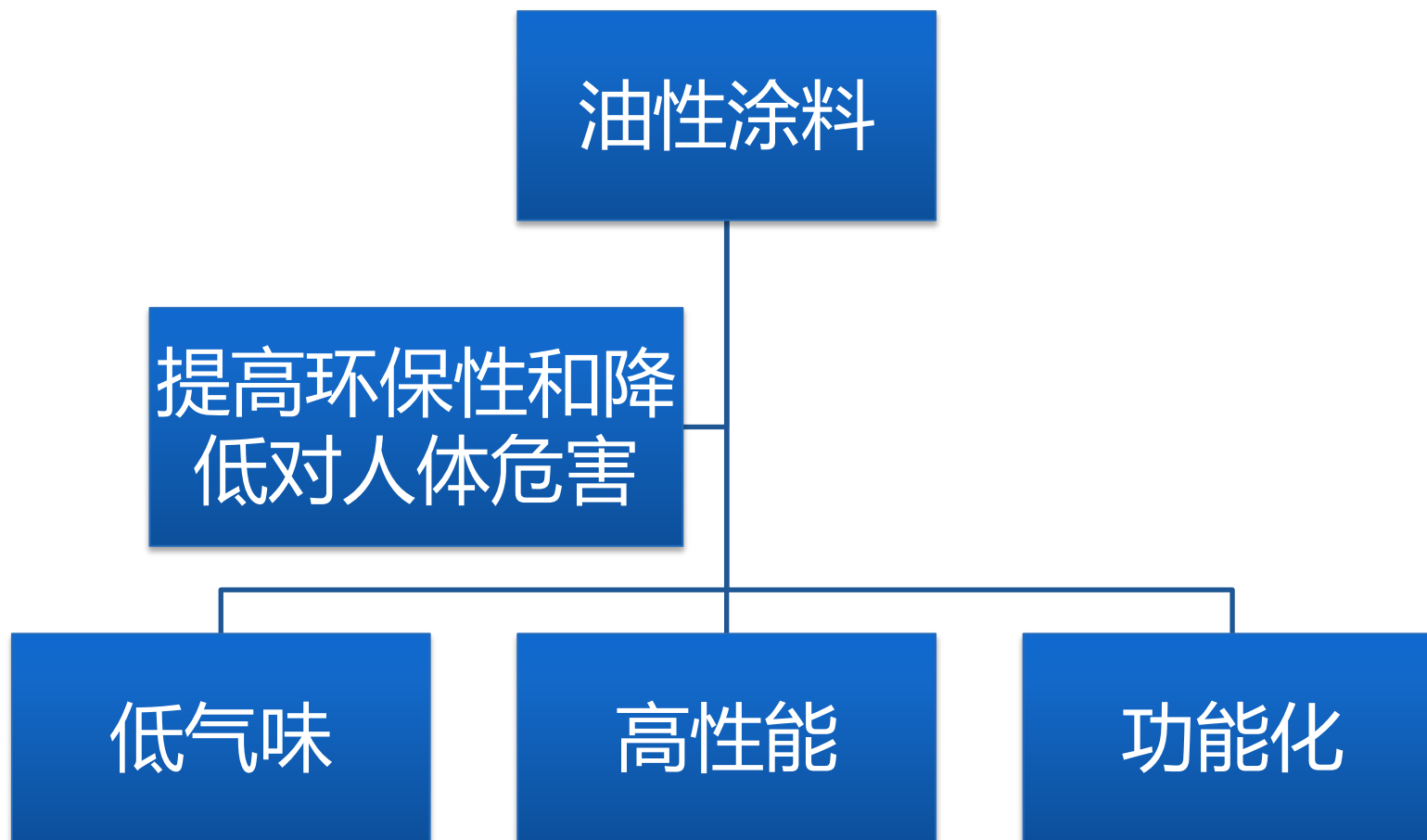
溶剂型涂料和水性涂料的主要差异

	溶剂型	水性
溶剂	有机溶剂例如甲苯，二甲苯，矿物油，醋酸丁酯等	水和少量的成膜溶剂(<5%)
主要树脂	硝化棉，醇酸树脂，羟基树脂，异氰酸酯等	水性丙烯酸，水性聚氨酯分散体
增塑剂	邻苯二甲酸盐包括邻苯二甲酸二辛酯 DOP，DNIP	不需要使用增塑剂
应用环境	配方需要考虑冬天和夏天温度的变化	需要考虑干燥环境，防尘，不锈钢管和维持生产线环境温度在18摄氏度以上
防火	由于涂料易燃，防火要求严格	不易燃
储存和运输	运输危险，要求符合危险品运输要求	需要加热贮存，运输要求维持在0摄氏度以上

水性涂装系统优势



油性涂料的发展



双效除醛健康木器漆



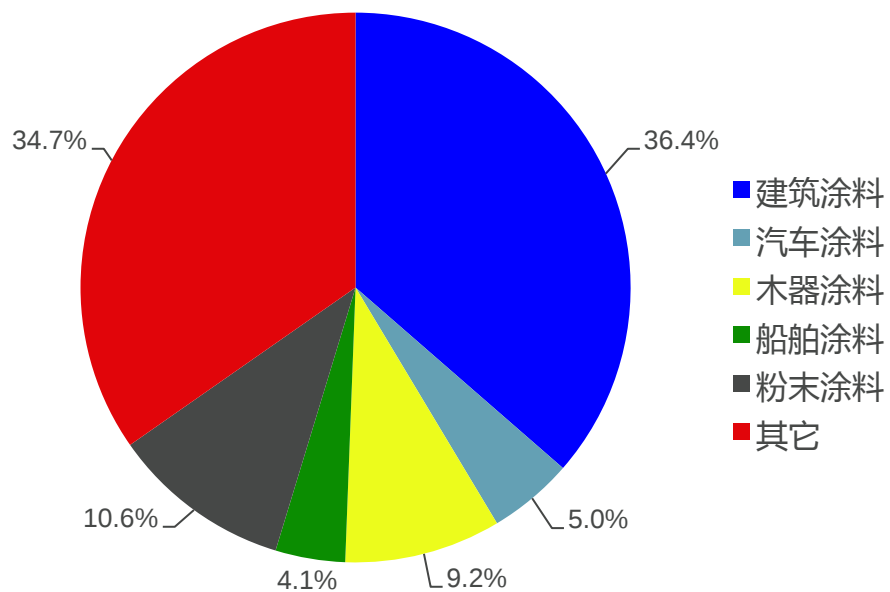


Architectural Coating: 建筑涂料:

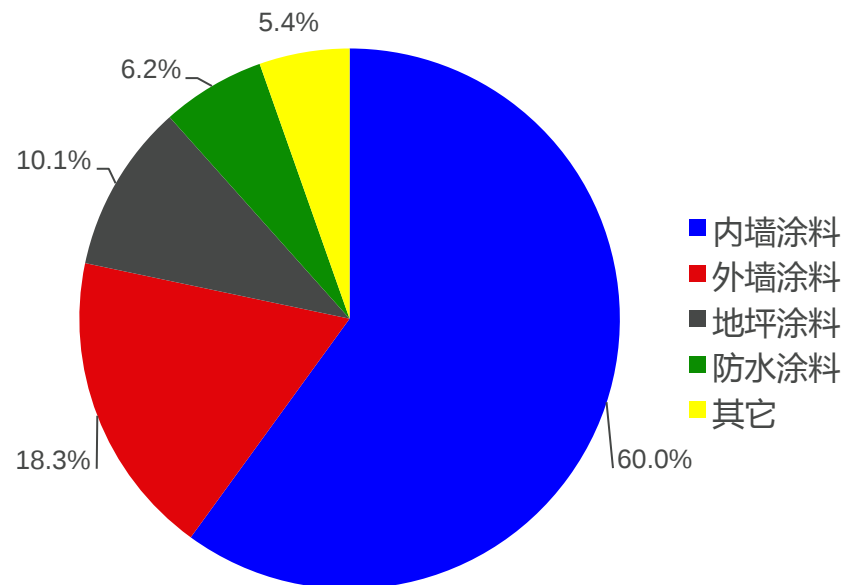


2010年国内涂料市场概况

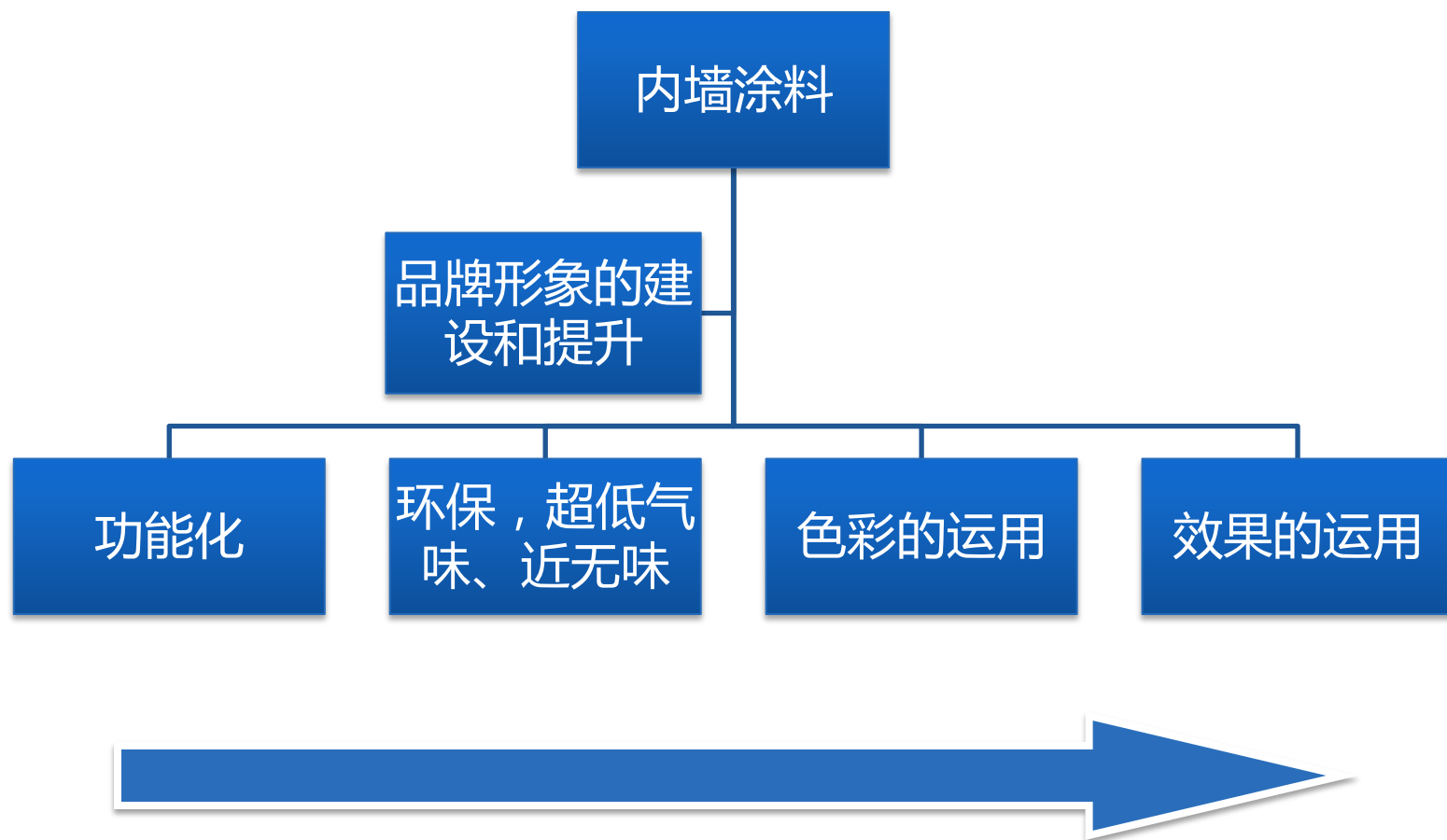
国内涂料总量966.8万吨



国内建筑涂料总量351.9万吨



内墙涂料的发展



威士伯防过敏内墙涂料



Asthma & Allergy Friendly Consumer Paints

The first consumer paint that is 0 VOC* (per ASTM E24) and certified “asthma and allergy friendly” by the *Asthma and Allergy Foundation of America*

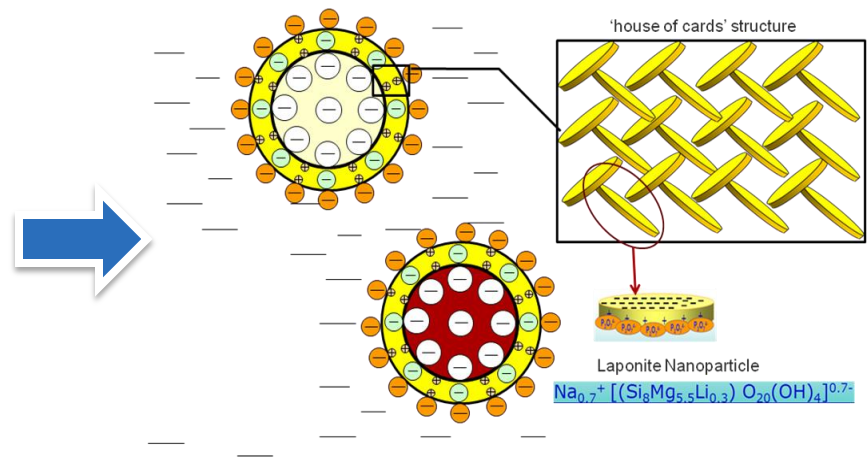
*Testing was performed by Allergy Standards Ltd., per ASP:04:01.



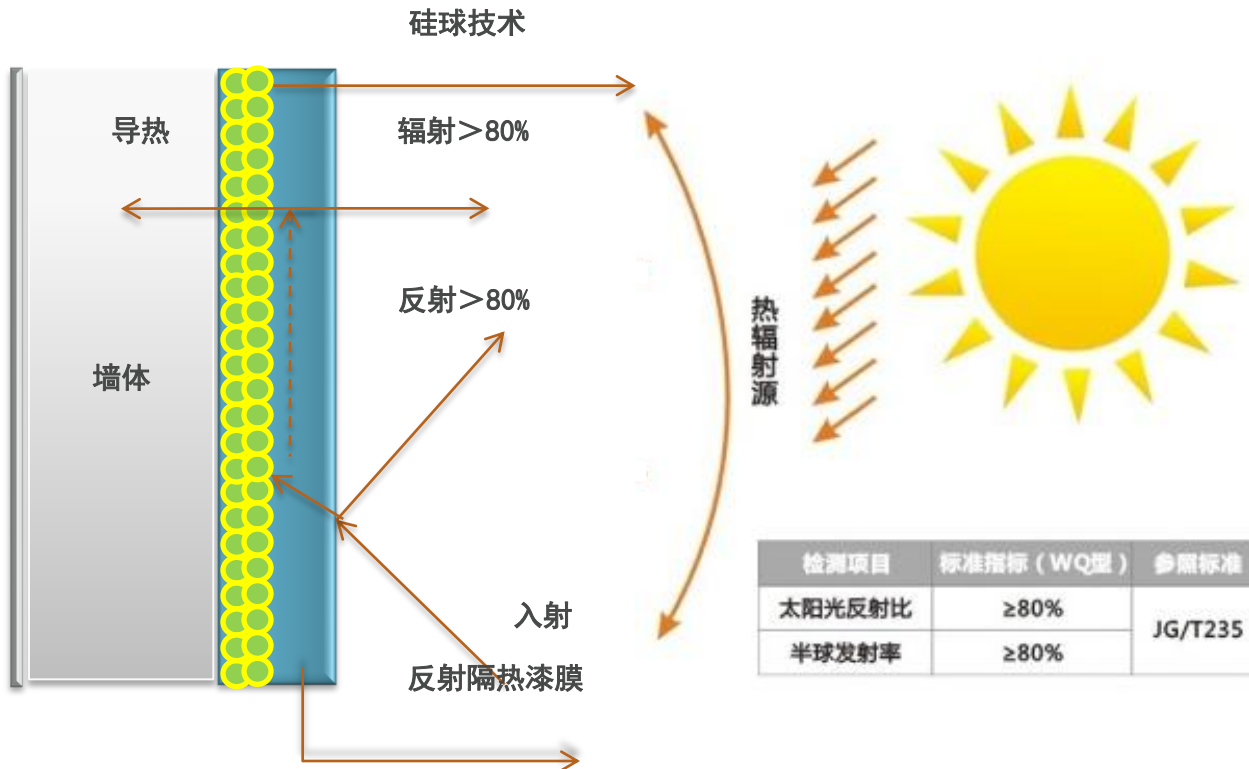
Exterior Stone Paint



'Water in water' multi-color - technology



外墙保温隔热涂料



全方位的生态家园



全方位的生态家园

• 技术介绍

室内生态防护技术：

- “空气清新”（Clean Air）环保技术，可以健康您的家居环境；
- “绿能关爱”（Eco-care）墙面漆技术，轻松节能、舒适您的家居生活；
- “耐磨超能防护”（Dura-shield）墙面漆技术，全方位呵护您的家居墙面安全；
- “固彩超能”（Dura-color）技术，丰富耐久的时尚色彩，保持您的家居环境历久如新；
- “抗污超能”（Dirt-shield）墙面漆技术，墙面污渍轻松祛除；
- “超能防霉”（Mould-shield）墙面漆技术，给您一个清新、健康的家居空间；
- “Low-E涂层”（Low-E heat insulating）技术，有效阻隔热辐射，舒适您的家居生活；

室外生态防护技术：

- “Ti3”三维立体交联外墙防护技术，使您家居外墙历久如新；
- “绿能防护”（Eco-guard）技术，防护节能一体化，舒适您的家居生活；
- “纯水多彩”（Aqua Sol-Gel）技术，环保健康，色彩绚丽；
- “紫外光固化”（UV-curing）技术，弹性优异，超强耐污；
- “纳米凝胶”（nano-sol）技术，实现超亲水界面，自洁性能优异；
- “帮固乐”（BondLok）纳米渗透强固技术，坚实基材，延长表面涂料使用寿命；
- “水盾”（Aqua-protect）水性金属漆技术，实现环保与防护一体化；

木器漆生态防护技术：

- “水润”（Aqua-care）水性木器漆技术，提供清新环保，高品质木器装饰；
- “无痕渗透”（Natural-protect）木蜡油技术，让木材自由呼吸；
- “双效除醛”（Dual-formaldehyde busting）技术，家居环境健康无忧



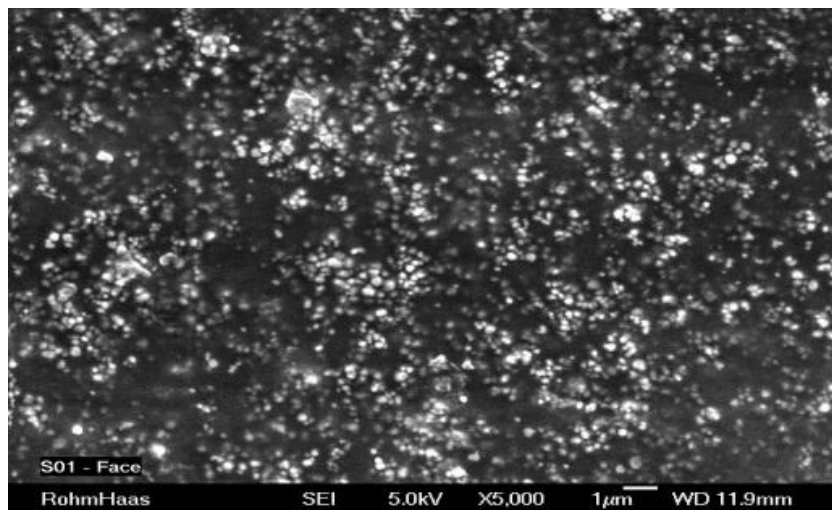
Eco-care



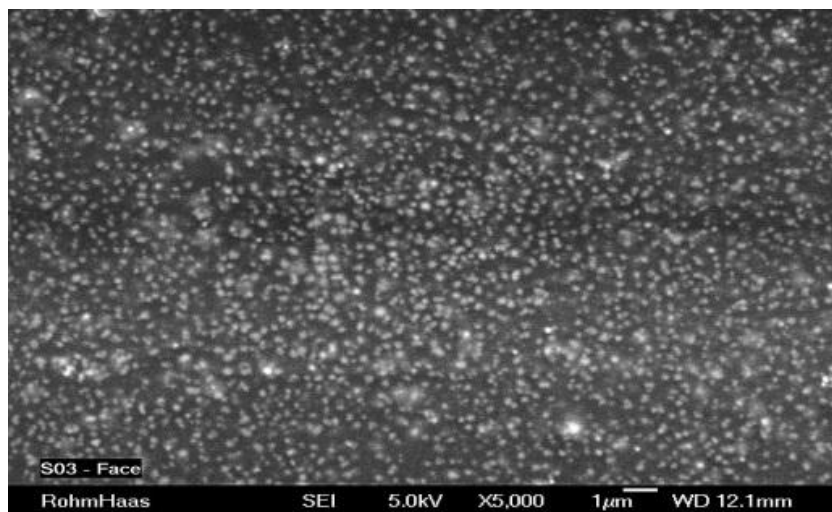
Dura-shield



TiO₂ 包裹技术

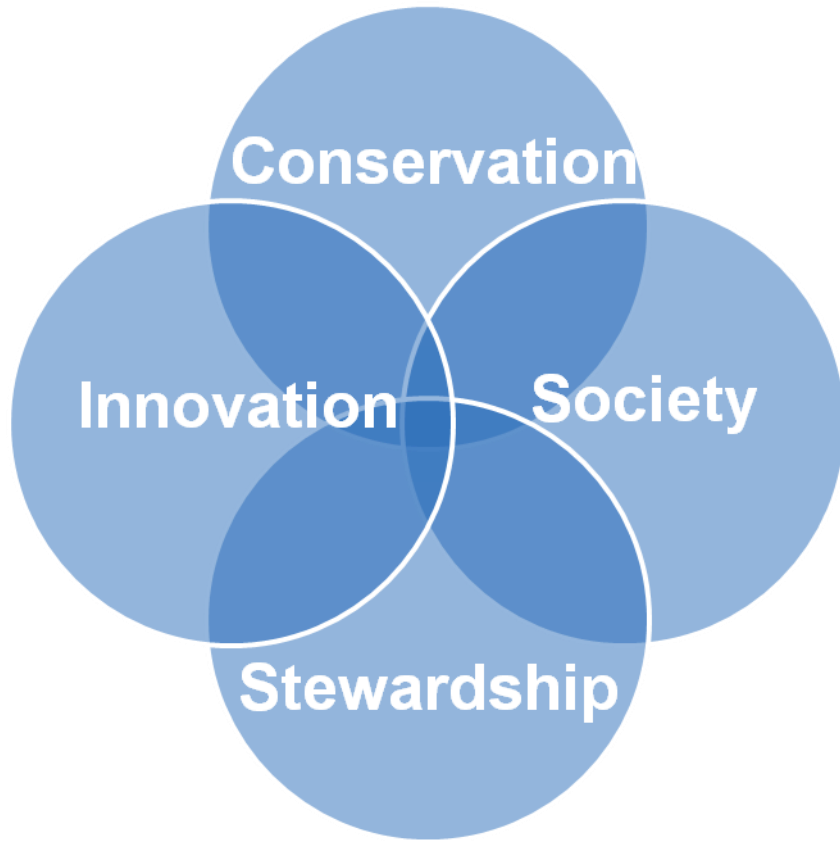


← 无TiO₂ 包裹技术



← 有TiO₂ 包裹技术
可实现降低钛白粉使用量

Valspar 威士伯的承诺：



威士伯的承诺：

- 涂料行业的领头规范化企业
- 永无止境的创新
 - 高度的环保
 - 优异的产品质量
 - 全心全意的客户服务

valspar

if it matters, we're on it.®

创新，环保，质量，服务

