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A & Q

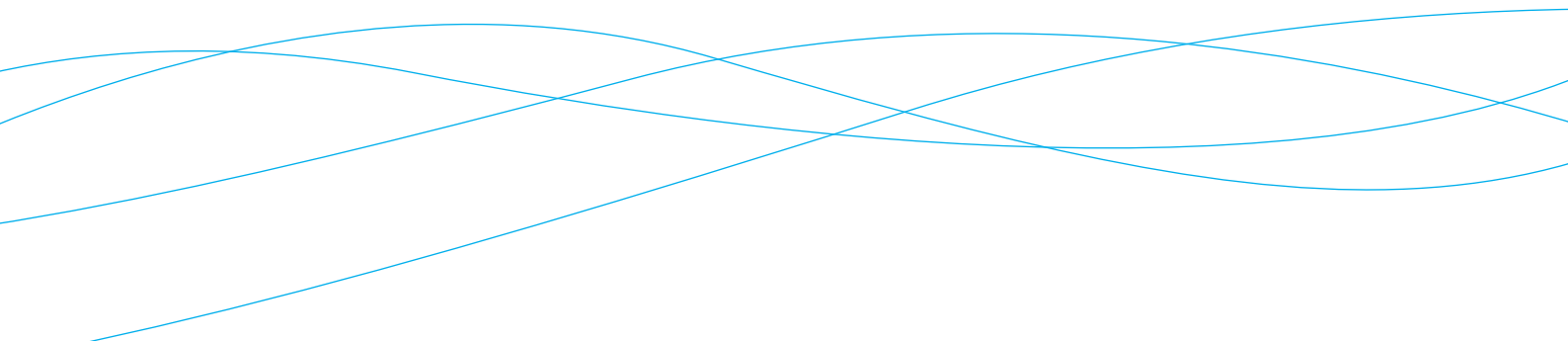
智能表面<sup>TM</sup> 价值无限 Smarter Surface<sup>TM</sup> Create more value

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玻璃易洁养护液

# 常见问题解答

GLASS CLEANER & PROTECTION  
Frequently Asked Questions



## 常见错误 COMMON MISTAKES

在清洗和应用过程中，要避免哪些常见错误

What are the most common mistakes to avoid with cleaning and application ?

### (1) 交叉污染:

Cross-Contamination:

清洗和应用 Smartguard™ 玻璃易洁养护液应该使用不同的纸巾 / 布。应注意用于清洁的纸巾 / 布要分开来使用（无意中将清洁用过的布拿来继续应用 Smartguard™ 玻璃易洁养护液）；

Different towels/cloths should be used for cleaning and for applying the CLEANER & PROTECTION chemical. Should be careful to separate the cleaning towels/cloths for using. (by accidentally using the cleaning cloth for applying the chemical).

### (2) 很差的表面准备:

Poor Surface Preparation:

即使是新玻璃，表面上也可能带有粉尘、油脂、水垢、手指印或其他污染物，因此在做易洁前要确保去除污染物；

Even new glass can have powder, grease, limescale, fingerprints and other contaminants on the glass, which must be removed before application.

### (3) 清洁剂或化学残留:

Cleaner or Chemical Residues:

如果使用的是浓缩液清洁玻璃，必须根据建议的稀释率进行稀释。带表面活性剂（洗涤剂）的清洁剂，添加了芳香剂或有其他任何化学物质会在表面留有残留物的情况，都必须避免；

If using a concentrate to clean the glass, it must be diluted according to the recommended dilution rate. Cleaners with surfactants (tensides), that have fragrances added, or that have any other chemicals that can leave residues on the surface, must be avoided.

(4) 湿玻璃:

Wet Glass:

如用了洗涤剂清洗玻璃，在应用 Smartguard™ 玻璃易洁养护液前，必须用玻璃刮水器或纸巾去除所有的水份。在潮湿的环境下或者玻璃存放在室外，湿气（露水）会沾在玻璃上。在应用 Smartguard 玻璃易洁养护液前，去掉玻璃上的水气是非常重要的；

If detergents are used to clean the glass, all water must be completely removed from the glass with a squeegee and paper towel before using the CLEANER & PROTECTION chemical. In humid environments or if the glass is left outside, moisture (dew) can form on the glass surface. It is crucial to remove all water from the glass before applying the CLEANER & PROTECTION chemical.

(5) 将清洁用的乙醇当成

Smartguard™ 玻璃易洁养护液:

Mistaking Ethanol Cleaner for  
CLEANER & PROTECTION :

乙醇和 Smartguard 玻璃易洁养护液在外观和气味上都一样。乙醇和 Smartguard™ 玻璃易洁养护液必须用标签贴明，最好用不同颜色的瓶子、在不同的地方进行储存，避免员工误将乙醇当 Smartguard™ 玻璃易洁养护液用。

Ethanol looks and smells the same as the CLEANER & PROTECTION chemical. The ethanol cleaner and the CLEANER & PROTECTION chemical should be clearly labelled, preferably stored in different colored bottles and in different locations, to prevent employees from applying ethanol to the glass by mistake.

玻璃工厂有自动清洗机的，使用工业用玻璃清洁剂会更适合，

## 清洗 CLEANING

### (1) 在应用前，清洗步骤是用乙醇还是工业用玻璃清洁剂好？

Is it better to use ethanol or an industrial glass cleaner to clean the glass before application?

假若清洗机被维护得很好，并且清洁溶剂定时更换（最好在每一批玻璃被养护液处理以前）。玻璃清洁剂的成本低一些，但人工成本会高一些（因为玻璃在清洁后要完全干燥），另外还会在玻璃表面留下清洁剂残留物。乙醇稍微会贵一点，但人工成本会低一些。乙醇的清洁方式在一定程度上更可靠，因为没有留有水分或其它残余物在玻璃上的风险，不会存在导致养护过程失败的潜在隐患。手工清洗的方式，通常会推荐用酒精；

The cost of glass cleaner material is cheaper, but the labor cost is higher (as the glass needs to be completely dried after cleaning). Ethanol is a somewhat more expensive material but the labor cost is lower. Ethanol cleaning is more reliable as there is no risk of leaving moisture or residues on the glass which would affect the application of the CLEANER & PROTECTION chemical, and potential cause the conversion process to fail. For hand cleaning, ethanol is generally recommended. For glass factories that have automated glass cleaning machines, using an industrial glass cleaner in such a machine would be the preferred method, provided the cleaning machine is well maintained and the cleaning solution is replaced regularly (It will be better before each batch of glass is daubing with CLEANER & PROTECTION).

### (2) 玻璃清洁浓缩液可以不进行稀释或比推荐要求少稀释来使用吗？

Can a glass cleaner concentrate be used without diluting it or diluting it less than recommended?

不行。清洁浓缩液本身设计就是要进行稀释的，如果不稀释或比推荐要求少稀释会有残留物留在玻璃上。此残留物会在养护过程带来负面影响或导致养护失败；

No. Concentrated cleaners are designed to be diluted and will leave a residue on the glass if used undiluted or diluted less than recommended. This residue will have a negative effect on the protection process or cause it to fail.

(3) 乙醇清洗和 Smartgard 玻璃  
易洁养护玻璃使用中，是用  
纸巾好还是用无纺布好呢？

Is it better to use a paper  
towel or a hybrid paper-  
and-cloth towel for ethanol  
cleaning and CLEANER &  
PROTECTION application?

纸巾便宜但损耗很快，无纺擦拭巾较好。无纺布在一定程度上是比较贵的，但更耐用，可以一整天频繁使用。当用于乙醇清洗时，要注意在它们变得很脏之前及时更换。

Paper towels are cheaper but wear out quickly. Hybrid paper-and-cloth towels, such as Tork Wipes are somewhat more expensive per piece but they are more durable and can often be used all day. When used for ethanol cleaning however, care should be taken to ensure that they are discarded before they become too dirty.

## 应用 APPLICATION

### (1) 玻璃在应用 Smartgard 玻璃易洁养护液后变得朦胧，我该怎么办？

The glass is hazy after application with Glass Cleaner & Protection. What should I do?

Smartguard 易洁玻璃的养护，不应该对玻璃的透明度和清晰度产生任何影响。玻璃朦胧表明有多余的材料没有通过擦光去除。为使多余材料和朦胧感的去除更容易，用纸巾沾少量 Smartgard 玻璃易洁养护液（这会帮助溶解多余材料，让它们从表面上松开），再用柔软的无纺布擦拭 / 磨光，将多余材料擦去。任何的朦胧感应该在应用 Smartgard 玻璃易洁养护液后几小时内擦拭 / 磨掉，否则时间太长了会更难去除。

The protection to Smartguard Glass should not affect the transparency or clarity of the glass at all. Glass haziness indicates there is excess material that has not been removed through polishing. To remove the excess material and haziness more easily, apply a small amount of the CLEANER & PROTECTION chemical to a paper towel (which will help dissolve the excess and loosen it from the surface), and rub/polish off the excess vigorously by hand. Alternatively, once the chemical has cured, washing with water should also remove any excess. Any haziness should be removed through rubbing/polishing within a couple of hours of applying the CLEANER & PROTECTION chemical. If the excess has not been polished off within a few hours and cannot be removed by ethanol anymore we can offer a special abrasive cleaner that removes the haziness. After usage it is recommended to apply the CLEANER & PROTECTION chemical again to the spots treated with the cleaner.

- (2) 当玻璃处在潮湿的环境中，甚至表面有薄雾或露珠出现时可否使用 Smartguard 玻璃易洁养护液？

Can the Smartguard Glass Cleaner & Protection, as a product, be applied to glass when there is moisture present, to the extent where condensation lies on the surface?

不行，玻璃必须完全干燥！当玻璃所处环境的湿度极高时，湿气会在玻璃的低温表面上凝聚成薄雾或露珠，即使是少量也能稀释掉养护液从而影响产品效果。建议另外干燥清洁玻璃，用吸水好的毛巾，玻璃清洗机（烘干机）或者气枪产生的高压气流来令玻璃彻底干燥清洁。

No. The glass must be completely dry. Condensation forms on glass when moisture from very humid air comes into contact the cold surface and condenses. Even a small amount of moisture on the glass would inhibit the effect of the product by diluting it. It is recommended that glass be dried using a towel or an automated glass washing machine.

- (3) 涂上的第二层 Smartguard 玻璃易洁养护液能起作用吗？

Can a second layer of the Glass Cleaner & Protection chemical be applied effectively?

不能。这种化学物是自组织型的，额外应用会填满一些还没发生化学作用的间隙，但这化学物只能构成一层一个分子的厚度。这个并不像涂料，可以额外涂加（只有一个分子厚的一层会跟玻璃发生化学粘结，其它就是过量的并且会脱落）。

No. The chemical is self-organizing and additional applications will fill in any gaps where the glass has not been protected properly, but the chemical can only form a layer one molecule thick. It is not like paint where you can apply additional coats (only one layer which is one molecule thick will chemically bond with the glass, the rest in excess and will come off).

- (4) Smartguard 玻璃易洁养护液可以应用在同一片玻璃的 2 个面吗？

Can the CLEANER & PROTECTION chemical be applied to both sides of a panel of glass?

可以。然而很多的应用，由于玻璃主要只一面容易脏，比如淋浴屏，厨房防溅挡板和建筑外墙，通常只做一面。

Yes. However for many applications where the glass will mainly get dirty on one side, such as showers, kitchen splashbacks and buildings, it is usually only applied to one side.

(5) 除了玻璃，Smartguard 玻璃易洁养护液可以在其它的材料上应用吗？

Can the Smartguard Glass Cleaner & Protection chemical be applied to other materials apart from glass?

不能。此养护液是特别设计与硅酸盐（玻璃）发生化学粘结，所以与其他基片不能有效粘结。

No. The CLEANER & PROTECTION is specifically designed to chemically bond with silicate (glass) so will not bond effectively with other substrates.

(6) 已经有其它易洁涂层的玻璃可以再转化为 Smartguard 易洁玻璃吗？

Can glass previously treated with a different Easy Clean coating be converted to Smartguard Glass?

不能。通常这种情况的转化过程不会成功，因为 Smartguard 玻璃易洁养护液无法跟玻璃完全地直接接触。但也有例外，比方说玻璃易洁养护液还是能在有抗反射涂层的玻璃（比如太阳能玻璃）上起作用。如果有要求，创思泰公司可以在特定的涂层上做测试，来确定养护过程的有效性。

No. In general the conversion process will not work as the CLEANER & PROTECTION chemical will not be able to make full direct contact with the glass. However there are some exceptions, for example the CLEANER & PROTECTION chemical may still work on glass (e.g. solar panel glass) with an Anti-Reflective (AR) coating. If required, Transtech Corp can carry out tests on the specific coating to confirm the effectiveness of the conversion process.



(7) Smartgard 玻璃易洁养护液能在阳光直接照射的地方应用吗?  
Can the CLEANER & PROTECTION chemical be applied in an area exposed to direct sunlight?

不能。必须在阴凉的地方。在暖和的天气，阳光直射带来的额外热量有可能导致化学液中的乙醇溶剂蒸发太快。

No. It should only be applied in a shaded area. In warm weather the additional heat from direct sunlight is likely to cause the alcohol solvent in the chemical to evaporate too fast.

(8) Smartgard 玻璃易洁养护液会导致金属件生锈吗?  
Can the CLEANER & PROTECTION chemical cause metal parts to rust?

会，因为 Smartgard 玻璃易洁养护液是稍微偏酸性的，会加速腐蚀的过程。必须确保喷瓶的触发器或者喷射设备上的金属（如果有的话）是防锈的。

Yes, the CLEANER & PROTECTION chemical is slightly acidic which will speed up the corrosion process. It should be ensured that the trigger in any spray bottle or the metal in any spray equipment being used (if any) is rust-proof.

## 玻璃加工 GLASS PROCESSING

(1) Smartguard 易洁玻璃可以接受钢化并仍然保持“不粘”和排斥的属性吗？

Can Smartguard Glass be tempered (toughened) and still maintain its 'non-stick' and repellent properties?

不能。Smartguard 易洁玻璃的特殊“不粘”和排斥属性只能在最高 300 摄氏度的情况下保持稳定，所以如果接受钢化，钢化时温度会远高于这个，就会被损坏或毁坏。

No. The special 'non-stick' and repellent properties of Smartguard Glass are only stable up to 300 degrees Celsius and so will be damaged or destroyed if exposed to tempering, which involves temperatures much higher than this.

(2) 刚钢化好的玻璃，可以不做额外清洁就应用 Smartgard 玻璃易洁养护液吗？

Can the CLEANER & PROTECTION chemical be applied immediately after tempering (toughening) without additional cleaning?

可以。通常刚从钢化炉出来的玻璃是完全干净的，因为污染物都烧掉了。如果钢化炉尾段的辊是干净的，工人也避免在玻璃上留下指印，Smartgard 玻璃易洁养护液通常可以在钢化完成后立即应用，不需要另外清洗。

Yes. In general glass comes out of the toughening furnace completely clean as contaminants are burnt off. If the rollers and area at the end of the tempering furnace is clean and workers avoid putting fingerprints on the glass, the CLEANER & PROTECTION chemical can usually be applied immediately after tempering, without additional cleaning required.

(3) 在玻璃深加工工厂，Smartgard 玻璃易洁养护液会在生产过程中的哪个阶段应用？

At what stage in the production process should the CLEANER & PROTECTION chemical be applied in glass processing factories?

Smartguard 玻璃易洁养护液会在生产过程的最后一个阶段应用，在钢化后立即应用，在最终包装前。

Smartguard Glass CLEANER & PROTECTION should be applied as the last stage in the production process, after tempering (toughening) and immediately before final packing.

(4) 在使用玻璃的制造工厂（比如淋浴房制造商）的生产过程中，Smartgard 玻璃易洁养护液会在哪个阶段进行应用？

At what stage in the production process should the CLEANER & PROTECTION chemical be applied in manufacturing factories that use glass (such as shower enclosure manufacturers)?

应用 Smartgard 玻璃易洁养护液会作为一个独立的步骤（经常也在一个独立的区域），独立于其他配件的组装。这样会保证应用过程的有效性和一致性，应用 Smartgard 玻璃易洁养护液的工人也会更容易接近整片玻璃。

Smartguard Glass CLEANER & PROTECTION should generally be applied prior to assembling the glass together with the other components. Generally the glass panels will be cleaned and the CLEANER & PROTECTION chemical will be applied in a separate process (and often a separate area) to the assembly with the other components. This helps to ensure that the application process is efficient and consistent, and that the workers applying the chemical will have easy access to the whole glass panel.

(5) 可以用玻璃吸吊机吸吊玻璃吗？  
Can a glass suction lifter be used to pick up the glass?

这种做法不推荐。因为吸盘有可能变脏并在玻璃上留下印迹。如果确实要用吸吊机，那么操作程序要调整为定期清洗吸盘并在应用 Smartgard 玻璃易洁养护液时对其进行监控确保其保持清洁状态。

This is not recommended as the suction cups can become dirty and leave a mark on the glass. If a glass suction lifter is used then operating procedures should be modified to regularly clean the suction cups and monitor them when being used during application of the CLEANER & PROTECTION to ensure they remain clean.

(6) Smartguard 易洁玻璃上的划痕可以抛光掉吗?  
Can scratches be polished out of Smartguard Glass?

不可以。用像氧化铈之类的研磨抛光剂来抛光 Smartguard 易洁玻璃上的划痕，会除去“不粘”和排斥的效果。如果必须抛光 Smartguard 易洁玻璃上的划痕，玻璃要彻底清洁过，并重新应用 Smartgard 玻璃易洁养护液来恢复特殊的“不粘”和排斥效果。

No. Polishing scratches out of Smartguard Glass using abrasive polishing agents like cerium oxide, will remove the 'non-stick' and repellent effects. If scratches must be polished out of Smartguard Glass, the glass should be thoroughly cleaned and the CLEANER & PROTECTION chemical applied again to restore the special 'non-stick' and repellent effects.

## 水滴测试 WATER-DROP TESTING

如果水滴测试发现 Smartguard 易洁玻璃并未很好的排斥水滴要怎么办？

What if the water drop test shows that the Smartguard Glass is not repelling the water drops well enough?

找出原因是必需的。玻璃是不是脏了？是不是湿的？表面上是不是有残留物或污染物？清洁剂的残余是不是留在玻璃上？玻璃清洁浓缩液是不是没有正确稀释？使用的布或材料本身是不是沾有其它的化学物或残余物？Smartgard 玻璃易洁养护液是不是被水或其它污染物污染？装 Smartgard 玻璃易洁养护液的容器盖是否长时间没盖上导致产品失效？湿度是否太大或者温度是否太低，因此需要几个小时后反应完全才能进行测试？如果这些可能的原因都排除后，可能是应用不彻底，需要进行第二次彻底的应用。

It's necessary to find out the reason why. Could the glass have been dirty? Could it have been wet? Could it have residues or contaminants on it? Could cleaner residues be left on the glass? Could a glass concentrate cleaner have not been fully diluted? Could there be other chemicals or residues on the application cloth or material? Could the CLEANER & PROTECTION chemical have got contaminated with water or other contaminants? Could the cap have been left off the CLEANER & PROTECTION chemical causing it to become ineffective? Is the humidity very high or the temperature very low and so the reaction needs several hours to occur before the glass can be tested? If all these possible reasons can be ruled out, it is likely that the application was not thorough enough and that a second thorough application is required.

## 玻璃的种类 TYPES OF GLASS

- (1) 有色玻璃可以转化成 Smartguard 易洁玻璃吗?  
Can body-tinted glass be converted to Smartguard Glass?
- 可以。  
Yes.
- (2) 覆上有色膜的玻璃可以转化成 Smartguard 易洁玻璃吗?  
Can glass with a tinted film applied be converted to Smartguard Glass?
- 不行。化学养护液会跟塑料膜接触而不是玻璃，因此转化过程不会成功。  
No. The CLEANER & PROTECTION chemical would make contact with the plastic film and not the glass, and so the conversion process wouldn't work.
- (3) 压花或有织纹的玻璃可以转化成 Smartguard 易洁玻璃吗?  
Can patterned and textured glass be converted to Smartguard Glass?
- 可以。  
Yes.
- (4) 酸蚀后的玻璃可以转化成 Smartguard 易洁玻璃吗?  
Can acid-etched glass be converted to Smartguard Glass?
- 可以。  
Yes.
- (5) 喷砂玻璃可以转化成 Smartguard 易洁玻璃吗?  
Can sand-blasted glass be converted to Smartguard Glass?
- 可以。  
Yes.

(6) 经过陶瓷印刷的玻璃能不能转化成 Smartguard 易洁玻璃?  
Can glass printed with a ceramic print be converted to Smartguard Glass?

能。然后在印刷区域，“不粘”和排斥的效果可能不那么明显和持久。

Yes. However the ‘non-stick’ or repellent effects may not be as effective or durable in the printed areas of the panel.

(7) 通过环氧树脂油墨印刷的玻璃可以转化成 Smartguard 易洁玻璃吗?  
Can glass printed with an epoxy print be converted to Smartguard Glass?

不能。Smartgard 玻璃易洁养护液不能在被环氧树脂油墨印刷的那部分玻璃上发挥作用。但没印刷到的部分仍然能有效果。

No. The CLEANER & PROTECTION chemical will not work properly on the epoxy printed part of the panel. However it will still work on the unprinted parts of the panel.

(8) 玻璃镜可以转化成 Smartguard 易洁玻璃吗?  
Can glass mirrors be converted to Smartguard Glass?

可以。但要注意，由于 Smartgard 易洁玻璃的低表面能，在蒸汽房的环境里，相比普通镜子，水蒸气更容易在转化过的镜子上凝结，模糊了镜像。因此用于蒸汽房环境的镜子，并不推荐转化成 Smartguard 玻璃。

Yes. But note that, due to the low surface energy of Smartguard Glass, in a steamy bathroom environment water droplets will form on a converted mirror more easily than a normal one, obscuring the reflection. So it is not recommended to convert mirrors that will be used in a bathroom environment to Smartguard Glass.

(9) 二氧化钛镀膜玻璃（比如 Pilkington 'Activ' glass）可以转化成 Smartguard 易洁玻璃吗？

Can glass coated with titanium dioxide (e.g. Pilkington 'Activ' glass) be converted to Smartguard Glass?

不能。

No.

(10) 离线软膜玻璃可以转化成 Smartguard 易洁玻璃吗？

Can soft-coated glass be converted to Smartguard Glass?

不能。一般来讲效果应该不会很好。如果有要求，创思泰公司可以在特定的涂层上做测试，来确定转化过程的有效性。

No. In general this will not work well. If required, Transtech Corp can carry out tests on the specific coating to confirm the effectiveness of the conversion process.

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