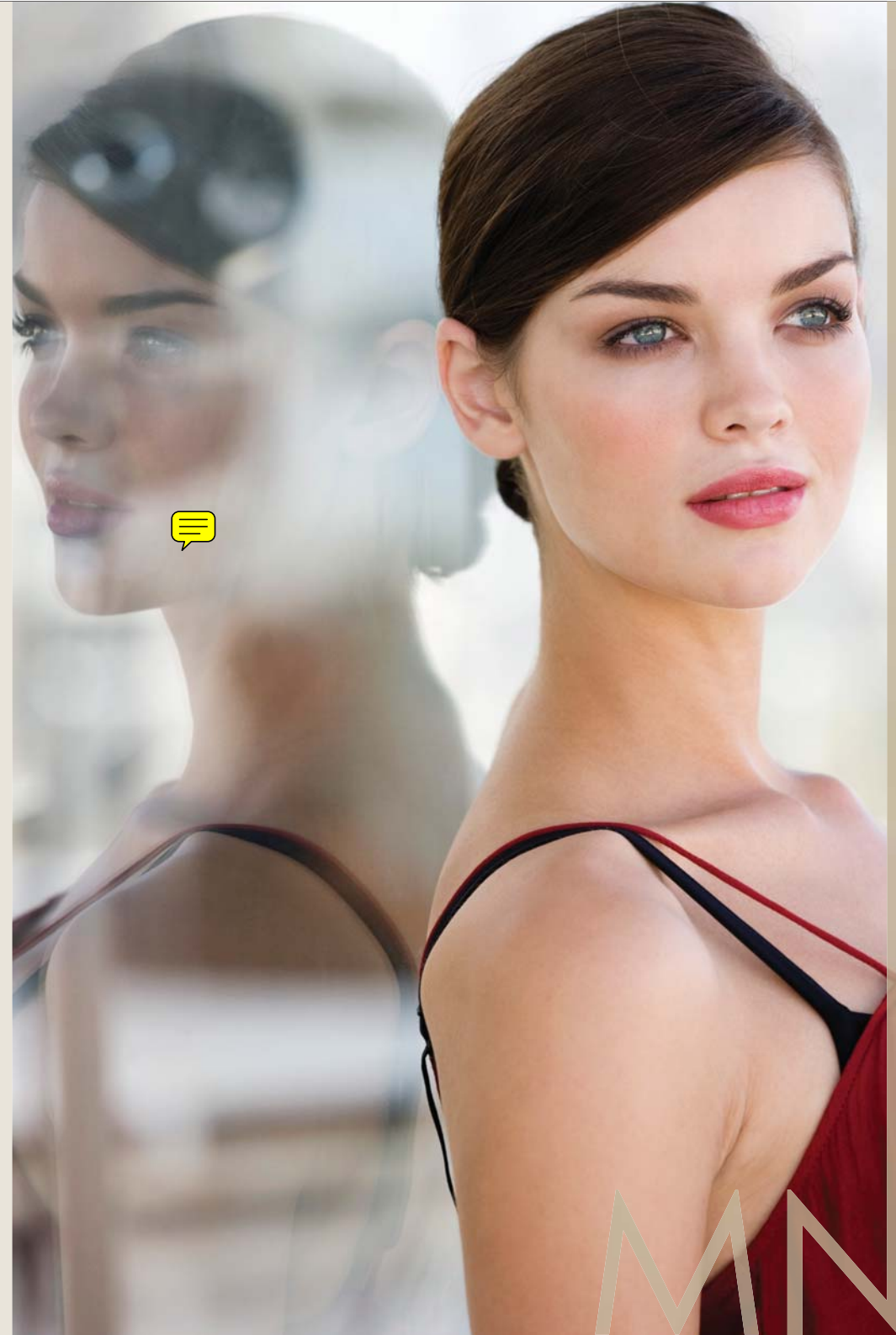




MIROX
NEW
GENERATION
ECOLOGICAL –
ENVIRONMENTALLY
FRIENDLY
MIRROR



AGC AGC Flat Glass Asia Pacific Pte Ltd

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M N G E
MIROX NEW GENERATION ECOLOGICAL MIRROR

MIROX NEW GENERATION ECOLOGICAL – ENVIRONMENTALLY FRIENDLY MIRROR

.....
Mirox New Generation Ecological (MNGE) is a high quality and high resistant mirror that prevails traditional mirror and easily exceeds the most stringent standards.
.....



MNGE

MIROX NEW GENERATION ECOLOGICAL MIRROR

MANUFACTURING PROCESS

.....

Mirox New Generation Ecological (MNGE) -
Quality Perfection & Environmental Protection

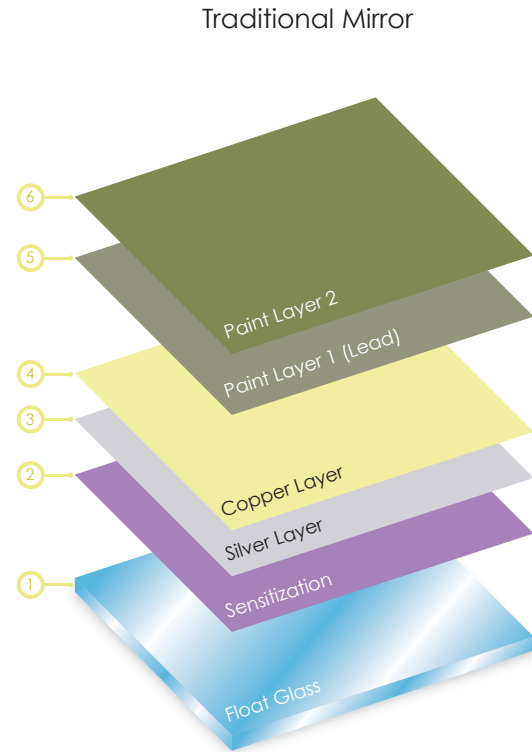
AGC's patented manufacturing process ensures that Mirox New Generation Ecological (MNGE) offers superior performance in terms of quality, resistance and ecology. MNGE mirrors reflect our Research Centre's ongoing quest for innovation and significant improvement.

These products, available exclusively from AGC, stand out for:

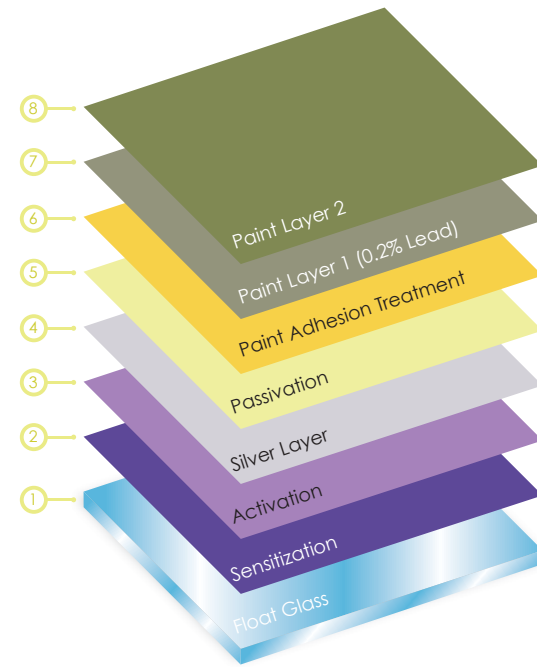
- their copper-free metal coatings
- the lead-free* protective paints used
- their ability to resist chemical damage

* 0.2% lead present

OVERVIEW OF TRADITIONAL AND MNGE MIRRORS



Mirox New Generation Ecological Mirror (MNGE)



* Activation treatment to affix the silver coating to the glass
 * Passivation protects the silver from oxidation

Copper + lead present

- Copper removed
- Lead content reduced significantly

Resistance to corrosion:
Average

Excellent
(green-coloured protective paint on the rear of the mirror)

Resistance to scratches:
Average

Average

Adhesion:
Adhesive tapes

Glues, silicones and adhesive tapes

SUMMARY OF PERFORMANCE AND TECHNICAL PROPERTIES

Durability of MNGE is determined by several accelerated ageing tests in compliance to EN 1036 (European standard). Summary of test results are presented in the following table :

		EN 1036 standard	Traditional Mirror	Mirox New Generation Ecological (MNGE)
Behaviour	CASS Test* ISO 9227	Maximum edge corrosion (mm) Number of Spots (number/dm ²)	2.5 2 < 3mm 3 < 0.3 mm	0.5 ≤ 1 ≤ 1
	Neutral salt spray test* ISO 9227	Maximum edge corrosion (mm) Number of Spots (number/dm ²)	1.5 2 < 3mm 3 < 0.3 mm	0.2 ≤ 1 ≤ 1
	Condensation water test ISO 9227	Maximum edge corrosion (mm) Number of Spots (number/dm ²)	0.2 2 < 3 mm 1 < 0.3 mm	0 ≤ 1 ≤ 1
Resistance to Adhesives	Oxime		YES	YES
	Alcoxy		NO	YES
	Rubber (tapes)		NO	NO
	MS polymer		NO	NO
	Acetic Acid		NO	NO
Ecology	Copper protection layer		YES	NO
	Lead content in the paint		> 8%	< 0.2%
Cleaning Products	Resistance to ammonia		1 day	> 7 days
Shaping	Edge grinding		YES	YES
	Brilliant cut		YES	YES
	Grounding		YES	YES
	Drilling		YES	YES
	Inserts and notches		YES	YES
Safety	Safe film		YES	YES
	PVB laminated		NO	NO
	Toughened		NO	NO
Adhesives for mounting	Compatibility with alcoxy-based silicones and tapes		NO	YES
	Compatibility with oxime-based silicones and tape		YES	YES
	Compatibility with acetic silicones		NO	NO

* Neutral salt spray test and condensation test are conducted for 480 hrs (20 days). Edge corrosion is measured on all 4 edges of mirror samples.

* CASS test is conducted for 120 hrs (5 days). Edge corrosion is measured on 2 vertical edges of mirror samples.

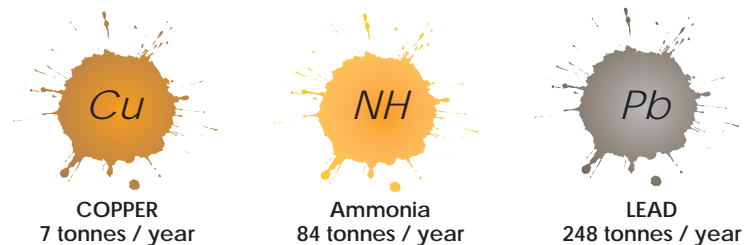
BENEFITS

- **Unparalleled resistance** to corrosion and ageing, MNGE lasts **three times longer** than traditional mirrors.
- **Enhanced resistance** to harsh cleaning products, MNGE is **seven times** more resistant than traditional mirrors.
- MNGE is **copper free** and hence reduces the development of brownish spots and stains over time.
- Manufactured using environmentally friendly process, MNGE **protects our environment** assertively.

ENVIRONMENTAL PROTECTION

- Mirror production results in a high concentration of ammonia in the effluent from the silvering line. Some 90% of this ammonia comes from the coppering process.
- Copper free mirrors help processors to care for the environment, since the effluent from shaping operations is totally free of copper.
- Given the increased stringency of both national and international environmental standards, MNGE mirrors are clearly a safe investment.

ELIMINATION OF TOXIC PRODUCTS



Elimination in the amount of toxic products produced based on an estimated 20,000,000 m²/year

RANGE

	3, 4, 5, 6, 8	MNGE available in SAFE	Standard Size (cm)
Clear	+ + + + +	+	321 x 225
Clearvision (extra clear)*	+ + + +	+	
Bronze	+ + + +	+	
Grey	+ + + +	+	
Privable	+ +	+	
Green	+ +	+	
Mirold Morena	+ +		

For SAFE enhanced versions, a polypropylene film is applied to the back of the mirror as a safety measure. In case of glass breakage, the fragments adhere to the plastic film and do not break up, preventing injury. When impacted on the glass side, the Safe coating complies with the requirements of BSI 6206, EN 12600 and ANSI z 97.1 standards.

* **Clearvision reflects a clearer image with minimal greenish tint.**

** Please check with AGC for other possible stock sizes.

APPLICATIONS

- Interior
- Furniture, partitions, tables, shelves, fixed and sliding doors for cupboards and wardrobes, display cases and glass boxes.
 - Wall cladding

Mirrors do not last a lifetime due to their delicate and sensitive properties. Proper design (i.e. framing etc), installation and handling methods can reduce deterioration and prolong lifespan of mirrors. For proper installation and processing of mirrors, please refer to AGC Mirror Installation and Handling guide.





5 清洗

- 务必仅使用清水清洗玻璃
- 切勿使用含氨基的清洁剂或其他侵蚀性清洁剂
- 确保彻底弄干所有接缝与边缘，以避免清洁剂接触边缘和玻璃背漆
(潮湿和化学品会腐蚀背漆，从而造成氧化)



6 其他可采取的保护措施

(特别适用于在易受损的位置安装，例如游泳池、海边、浴池)

- 在玻璃背面粘贴安全膜
- 使用中性固化密封胶密封所有缝隙，以免日后水蒸气渗入边缘和镜子背面
- 使用镜框封盖镜子边缘，以供长期使用

简介

每个玻璃安装人员都希望从容安装，每位顾客都希望自己的镜子经久耐用。

但是，由于镜子易碎易损的特性，它无法让用户终生使用。出于保护不力、处理不当或者环境因素的影响，所有的镜子随着时间的推移都有自然腐蚀的趋势（特别是在边缘处）。

虽然与传统铜镜相比，无铜镜的抗腐蚀能力更强，但仍需小心谨慎，以减少损伤和延长镜子的使用寿命。在处理 and 安装过程中，安装者和用户均有责任保护玻璃边缘和背漆，以防长期潮湿或有害化学品的侵蚀。



一般来说，大多数镜子生产商不会对镜子和彩色玻璃提供保修服务，特别是安装后的产品。我们深信，只要遵循我们的指南，即可将瑕疵的风险降至最低。

免责声明

本指南的内容是基于我们在出版时所掌握的全部知识和经验编写的。如需其他帮助，顾客及玻璃安装人员可联系AGC销售团队。条件和环境会根据情况不同而有所差异。镜子安装者有责任确保镜子的安装与维护符合所有相关的本地条例、法律、法规、适用标准和其他要求。

✍️ 安装前快速一览表

- ✓ 玻璃边缘的制作与保护完好
- ✓ 采用的边缘密封胶中性且适用
- ✓ 采用适宜的粘合剂
- ✓ 粘接方法正确
- ✓ 安装面处理正确（如有必要，进行防水处理）
- ✓ 玻璃与安装面之间保持适当的间隙（3-5 毫米）
- ✓ 确保环境中没有不相容或有害的化学品

安装与处理指南

适用于镜子和彩色玻璃



AGC

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AGC

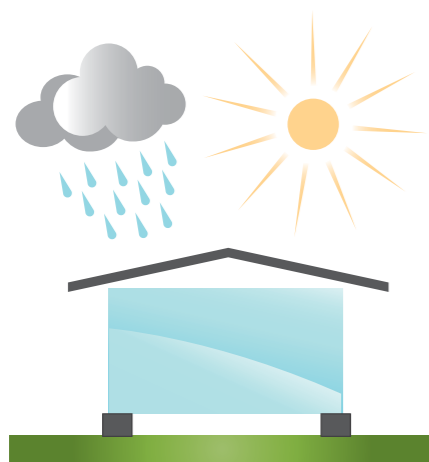
本指南针对 AGC 所推荐的镜子及彩色玻璃的安装进行了详细的阐述。

安装镜子是一个精密细致的工艺流程。不正确的处理或安装，可能会对镜子造成损坏，最终导致高昂的更换成本和客户的不满。

正确的处理和安装是确保以下事项的关键：

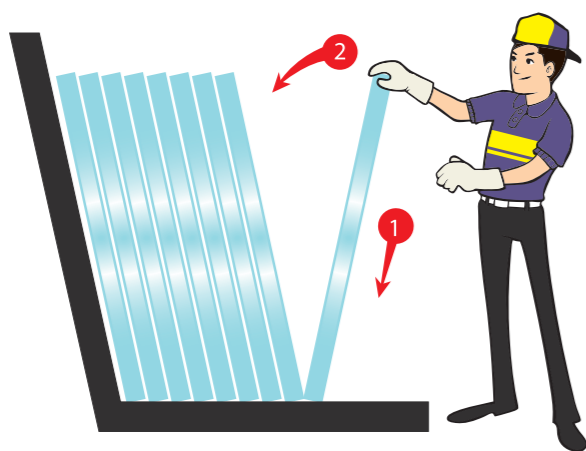
- 玻璃安装人员和最终用户的安全
- 产品经久耐用

注意：在本手册中，玻璃是指镜子和彩色玻璃



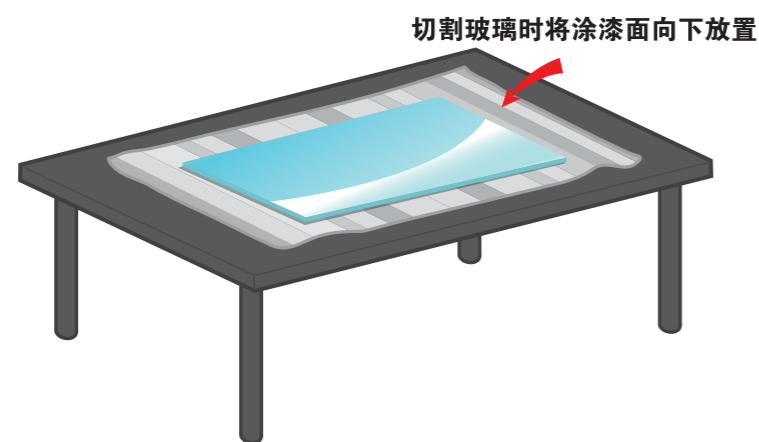
1 贮藏

- 在干燥处保存（以避免冷凝）
- 建议贮藏时间最长为6个月（因情况而定）
- 正确堆放和搬移



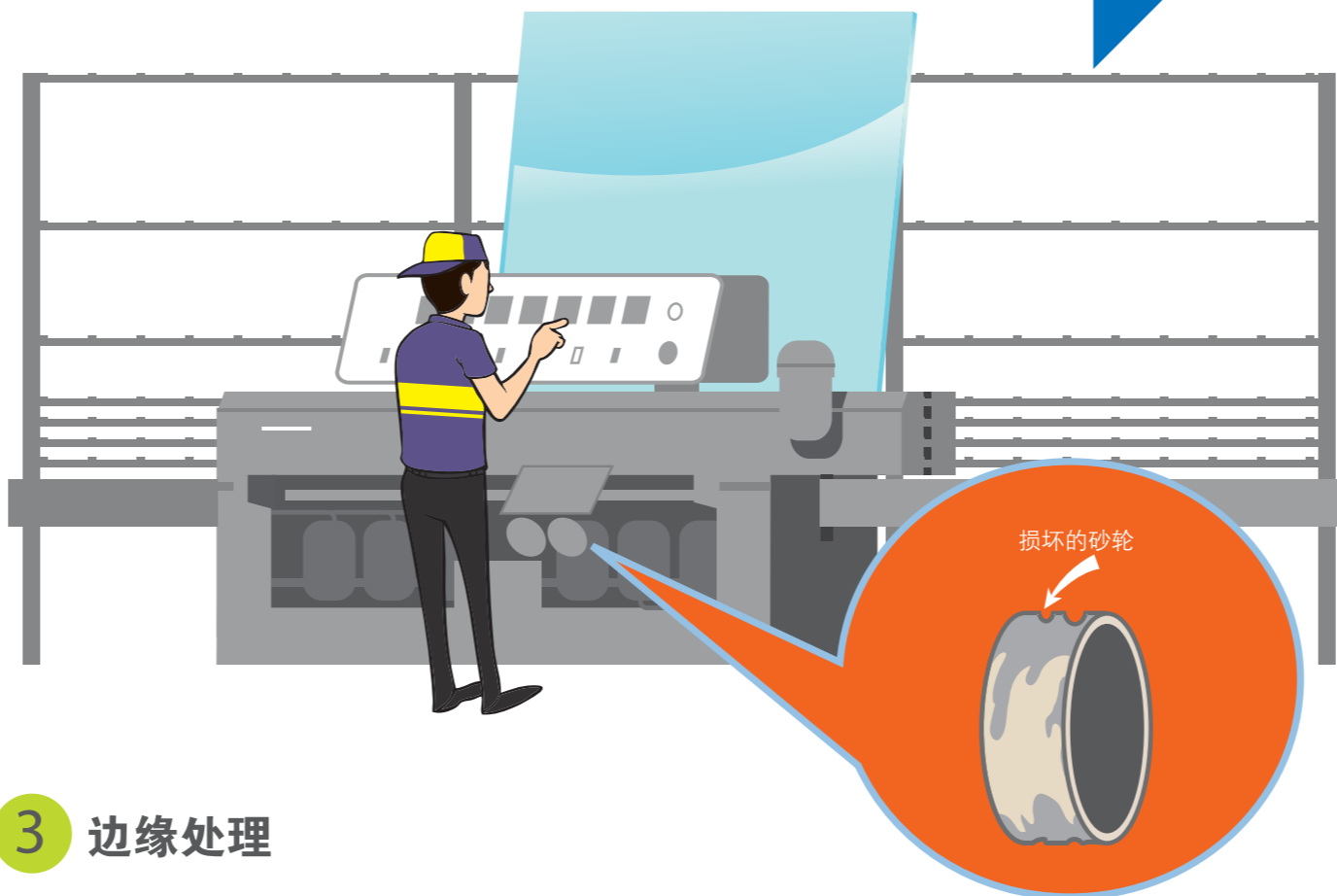
2 切割

- 定期清洗切割台（以避免刮花玻璃）
- 仅采用中性切削油
- 切割玻璃时将涂漆面朝下



镜子最易损伤的部分是银暴露在外的边缘处。与刚切割的边缘相比，加工后的边缘（例如打磨和抛光）更容易腐蚀。

因此，在处理过程中，请务必特别留意保持玻璃背面和边缘的完整性。



3 边缘处理

请确保

否则……

调整适当的机器速度

▶ 速度不妥会影响玻璃背漆的状态

使用中性冷却液

▶ 酸性或碱性冷却液可能会腐蚀玻璃边缘的银

定期清洗冷媒水回路并更换冷媒水

▶ 过度使用后，冷媒水可能变为酸性/碱性

砂轮应须处于良好的状态，并且在出现磨损前进行更换

▶ 损坏的砂轮可能会削薄玻璃背漆

处理完边缘后，用水清洗玻璃并立即弄干（特别是玻璃边缘周围）

▶ 水分渗入可能会腐蚀玻璃边缘的银

** 其他可采取的保护措施（请参阅背面第4页）

4 安装

4.1 安装面准备工作

- 表面必须清洁干燥
- 如有必要，在表面涂抹防水密封胶
- 切勿在新抹的灰泥、新修补的水泥或新涂的墙壁上安装



4.2 粘合剂/粘接剂类型

- 切勿使用酸性胶水
- 可使用含烷氧基和胍的硅树脂
- 胍硅树脂和双面胶带极其安全，适宜采用
- 有关推荐的粘合剂品牌列表，请与你所在地的分销商联系

4.3 粘合剂/粘接剂的使用

- 遵守粘合剂供应商的安装指南
- 确保使用的粘合剂适用于玻璃背漆和安装面
- 沿垂直条纹的方向使用粘合剂（胶水/胶带），确保玻璃背面和安装面之间空气流通
- 对玻璃和安装面区域施以常压
- 在玻璃和安装面之间保持3-5毫米的间隙，以便通风良好



沿垂直条纹的方向使用粘合剂（胶水/胶带）

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AGC不生产粘合剂，因此无法保证任何粘合剂在镜子上的使用效果和性能。顾客自行承担因使用所推荐的粘合剂品牌列表所产生的一切风险。顾客应根据所需的安装方法，进行内部抽样试验，以确保取得一致的性能。应严格遵守所有生产商的处理说明。