CHEMLOK® AP-133

Technical Data Sheet

Chemlok® AP-133 is a clear, one-coat surface treatment used to affix unvulcanized silicone rubber to various substrates such as metals, glass, plastics and textiles.

Chemlok AP-133 also works on specialty elastomers such as fluoroelastomers, polyacrylates, epichlorohydrin and some peroxide-cured elastomer

Features and Benefits

Versatile: used on a wide variety of commercially available elastomer stocks and many diverse metallic and nonmetallic substrates.

Environmentally Resistant: creates high strength systems capable of withstanding salt spray, harsh chemical exposure, corrosive atmospheres and temperature extremes.

Durable: provides high strength performance at both high and low temperatures.

Easy to Apply: applies easily by brush, spray or dip methods.

High Temperature Resistant: withstands temperatures up to 204°C (400°F), and below -51°C (-60°F) for fluoroelastomers or silicone.

Elastomers

- Fluoroelastomer (FKM)
- Epichlorohydrin (ECH)
- Polyacrylate (ACM)
- Viton®
- Silicone (VMQ, PMQ, PVMQ) - peroxide cure
- EPDM Polymers - peroxide cure
- Nitrile (NBR) - peroxide cure
- Hydrogenated Nitrile (HNBR) - peroxide cure

Application

Surface Preparation: Thoroughly clean metal surfaces prior to application. Remove protective oils, cutting oils and greases by solvent degreasing or alkaline cleaning. Remove rust, scale or oxide coatings by suitable chemical or mechanical cleaning methods.

Carefully prepare nonmetallic surfaces. Fabric is usually desized by a scouring operation. Glass can be cleaned in an alkaline bath. Clean plastic surfaces with a solvent.

For further detailed information on surface preparation of specific substrates, refer to Chemlok application guide.

Mixing: Pour Chemlok AP-133 into a receptacle and dilute with toluene, methanol or ethanol as required. Average dilution ratio of 1:1 will provide the optimum performance and maximum coverage with minimum product use.

Pour out only enough Chemlok AP-133 to use for a short period of time, as rapid evaporation occurs in open containers. Porous substrates, such as heavy fabrics, may require more extensive dilution in order to prevent excessive pick-up.

Applying: Apply Chemlok AP-133 in a uniformly thin coat by brush, spray or dip methods. Performance can be compromised by repeated brushing or improper dipping drainage.

When coating fabrics, use a dry pick-up level of 0.05-1.0%, based on the dry weight of the fabric. Spray applications ensure that Chemlok AP-133 is effectively applied to the fabric surface. For fabrics that are dipped or brushed, diluting Chemlok AP-133 will help prevent fabric stiffness caused by excessive pick-up levels. For information on using dyes and fluorescing additives with Chemlok AP-133, contact your Parker Lord Technical Service Representative.

Typical Properties*

Appearance	Clear Liquid
Viscosity, cSt	~ 5.0
Density kg/m^3 (lb/gal)	 790.0 - 830.0 (6.6 - 6.9)
Solids Content by Weight, %	4.8 - 6.2
Flash Point (Seta), °C (°F)	14 (57)
Solvents	Methanol, Ethanol, Toluene

*Data is typical and not to be used for specification purposes.

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Drying/Curing: Allow Chemlok AP-133 to air-dry for approximately 10-30 minutes at room temperature. Porous substrates may require a longer time for the solvent to completely evaporate. Allow for longer drying times during humid conditions. The parts can be dried at elevated temperatures; excellent results have been achieved by drying at 104°C (220°F) for 15 minutes.

Parts coated with Chemlok AP-133 may be vulcanized immediately after air-drying.

Open steam, autoclave and other curing methods are also amenable to creating strong performing systems with Chemlok AP-133. Maintain intimate contact between the compound and the substrate.

Oven or post-cures can be used to enhance the cohesive strength of the system because the parts are exposed to higher temperatures for longer periods of time than during press-cure.

Exposing the system to high temperatures without proper conditioning at lower temperatures is detrimental to performance. This conditioning is especially important for end-use temperatures that exceed 204°C (400°F).

Systems created using Chemlok AP-133 are resistant to many destructive environments. Electroplating or anodizing metal parts after fabrication will not harm the quality of the system.

Shelf Life/Storage

Shelf life is one year from date of shipment when stored by the recipient at 21-27°C (70-80°F) in original, unopened container. Do not store or use near heat, sparks or open flame.

Cautionary Information

Before using this or any Parker Lord product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

Verify Volatile Organic Compounds (VOC) requirements with the applicable local, regional and state air quality authorities before importing, selling or using this product. VOC rules, thresholds and reporting obligations vary by jurisdiction; compliance is the responsibility of the importer/seller/owner.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

Parker Lord
Engineered Materials Group
111 LORD Drive
Cary, NC 27511-7923
USA
www.parker.com/EPM

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CHEMLOK® AP-133

技术说明书

Chemlok® AP-133是一种透明的单涂表面处理剂，可以帮助和促进未固化的硅橡胶附着至各种基材，如金属、玻璃、塑料和织物等。

Chemlok AP-133还可应用于特殊弹性体，如含氟弹性体、聚丙烯酸树脂、氯醚橡胶及某些过氧化物固化的弹性体。

特征和优点

用途广泛: 可帮助和促进各种常见的弹性体与各种金属和非金属基材的粘合。

耐环境性强: 形成高强度结构，可耐受盐雾、化学品、油、溶剂、腐蚀性空气和极端温度。

耐久性强: 无论是高温还是低温条件下，提供高强度性能。

易于涂敷: 刷涂、喷涂或浸涂均可。

耐高温性强: 用于含氟弹性体或硅橡胶时，最高可承受的温度为204°C (400°F) ，最低温度为-51°C (-60°F)。

弹性体

- 含氟弹性体 (FKM)
- 氯醚橡胶 (ECH)
- 聚丙烯酸酯 (ACM)
- Viton®
- 硅橡胶 (VMQ, PMQ, PVMQ) - 过氧化物固化
- EPDM 聚合物 - 过氧化物固化
- 丁腈橡胶 (NBR) - 过氧化物固化
- 氢化丁腈橡胶 (HNBR) - 过氧化物固化

使用方法

表面处理: 在涂敷前，应彻底清洗金属表面。使用溶剂型除油剂或碱性清洗剂去除金属表面的保护油、切削油和油脂。选择适当的化学清洗或机械清洗方法除去金属表面的锈、氧化层或氧化膜。

仔细准备非金属表面。对纺织物，通常要进行煮炼退浆。玻璃可用碱浴法进行清洗。塑料表面用溶剂进行清洗。

对于特定基材的表面处理的详细信息请参阅Chemlok/Chemosil应用指南。

混合: 将AP-133倒入容器内，根据具体需要，用甲苯、甲醇或乙醇进行稀释。平均稀释比为1:1，此时最小的用量可以提供最优的性能和最大的覆盖面积。

AP-133在敞口容器内会快速挥发，因此每次不要稀释调配太多，调配后应迅速用完。对于厚织物等多孔基材，为了防止基材上附着的产品过多，可能需要进行大比例稀释。

涂敷: Chemlok AP-133时，应形成均一的薄膜，可刷涂、喷涂或浸涂。如果反复刷涂或在浸涂时沥干操作不当，会影响性能。

涂敷于纺织物表面时，根据纺织物的干重大小，将Chemlok AP-133的干附着量控制在0.05-1.0%。喷涂可确保Chemlok AP-133有效附着于纺织物表面。浸涂或者刷涂纺织物时采用稀释的本品可防止因涂敷过多而导致纺织物变硬。要了解染料和荧光添加剂如何与本品配合使用，请联系派克洛德的技术服务代表。

典型特性*

外观	清澄液体
粘度, cSt	~5.0
密度 kg/m³ (lb/gal)	 790.0 - 830.0 (6.6 - 6.9)
固体含量, %	4.8 - 6.2
闪点 (Seta), °C (°F)	14 (57)
溶剂	甲醇、乙醇、甲苯

*典型数据不可作为产品标准之用。

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干燥/固化: 涂敷Chemlok AP-133后，室温下自然风干10至30分钟。多孔基材可能需要延长风干时间，以确保溶剂彻底挥发。空气湿度比较大时，延长干燥时间。涂敷后的工件可高温干燥，在104°C (220°F)的温度下干燥15分钟后可获得出色的效果。

涂敷Chemlok AP-133的工件在自然风干后可立即进行硫化。

对于Chemlok AP-133，采用蒸汽固化、高压罐式固化和其他固化方法都可以获得出色的性能。橡胶与基材面之间需保持完全接触。

烘箱或后固化处理可以提高内聚强度，原因是较模压工艺可以在更高的固化温度下进一步延长固化时间。

工件暴露在高温之前没有在较低的温度下进行程序调温，这将会对最终性能造成损害。如果最终使用温度超过204°C (400°F)，程序调温是非常重要的一步。

Chemlok AP-133可抵御许多破坏性环境。在装配后对金属件进行电镀和阳极化处理不会破坏界面的性能。

保质期/储藏要求

自发货之日起，保质期为一年，但是收货人必须使用出厂未开封的原装容器，且保存在21-27°C (70-80°F) 环境下。储藏或使用时不得靠近热源、火花或明火。

警示信息

使用本品或派克洛德 (Parker Lord) 任何产品之前，请参阅安全数据表 (SDS) 和产品标签上关于安全使用和处理的说明。

在进口、销售或使用本产品之前，请与当地及相关国家区域的空气质量主管部门核实挥发性有机物 (VOC) 的要求。VOC的规定、阈值和报告义务因地区而异；合规责任在于进口商/销售商/所有者。

*仅可用于工业/商业用途。*要求本品在有组织排放下使用。使用本品者事先必须接受相关培训。不得用于家庭用途。不得用于消费品。

Parker Lord
工程材料集团
111 LORD Drive
Cary, NC 27511-7923
USA
www.parker.com/EPMChina

派克洛德中国
中国（上海）自由贸易试验区日樱北路333号
邮编: 200131
邮件: LORDChinaMarketing@parker.com
电话: +86 21-3133 0800
传真: +86 21-2042 2361

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