

CHEMLOK® 213

Technical Data Sheet

Chemlok® 213 is a one-coat surface treatment used to affix castable and RIM urethane elastomers to metal. It is composed of a mixture of polymers, curatives and pigments dissolved in an organic solvent system.

Chemlok 213 can also be used to affix a wide variety of both polyether and polyester castable urethanes to metal, as well as affix certain thermoplastic polyurethanes (TPU).

Features and Benefits

Versatile: affixes metal to a wide variety of polyether and polyester castable urethanes of varying hardness, based on both TDI and MDI.

Economical: eliminates the need to inventory several surface treatments due to its versatility.

Convenient: requires only a single coat for most applications, minimizing application costs; affixes RIM urethane elastomers directly to aluminum or steel without the need for primers or prebaking.

Process Compatible: accommodates a wide range of processing conditions, including extended prebake.

Environmentally Resistant: adds durability for harsh environment exposure, including salt spray and water and temperature exposures, when used with Chemlok 219.

Time Saving: requires no agitation in preparation for use or during application, saving application time and reducing the potential for application errors. Non-settling Chemlok 213 is ready to dip or brush when opened.

Fast Drying: dries fast to allow rapid turnaround times, reducing the number of coated parts kept in inventory.

Durable: provides high strength performance greater than the tear strength of the urethane substrate.

Elastomers

- Millable Urethane
- Castable Urethane
- Thermoplastic Urethane (TPU)

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.

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

Mixing: No agitation is required before or during use. If dilution is needed, use Chemlok 248 thinner and mix thoroughly. Note proper dilution for the various application methods is best achieved by experience.

Applying: Apply Chemlok 213 in a uniformly thin coat by brush, spray or dip methods. To avoid film bubbling, do not apply Chemlok 213 to substrates hotter than 82°C (180°F).

Regardless of application method, the dry film thickness of Chemlok 213 should be 19.05-31.75 micron (0.75-1.25 mil). Thicker films caused by repeated brushing or improper dipping drainage can compromise performance.

Typical Properties*

Appearance	Blue Liquid
Viscosity cps @ 25°C (77°F) Brookfield LVT Spindle 2, 30 rpm seconds @ 25°C (77°F) Zahn Cup #3	100 - 300 20 - 35
Density kg/m ³ (lb/gal)	870 - 910 (7.3 - 7.6)
Solids Content by Weight, %	20.5 - 23.5
Flash Point (Seta), °C (°F)	5 (41)
Solvents	Methyl Ethyl Ketone (MEK), Acetate Blend, Xylene

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

Chemlok 219 is an excellent surface treatment to use with Chemlok 213. For castable urethane, the properties of Chemlok 219 and Chemlok 213 are complimentary - Chemlok 219 provides excellent protection as a primer for the metal; Chemlok 213 works well with RIM, TPU and castable polyurethanes. Chemlok 213 is also tolerant of processing conditions such as long prebakes. Together, they increase resistance to a variety of environmental elements.

When using Chemlok 219 as a primer, first apply Chemlok 219 and allow it to air-dry. Then apply Chemlok 213 and allow to air-dry. The combination is then prebaked at 121°C (250°F) for the desired time.

Drying/Curing – Allow coated parts to air-dry for 30-60 minutes at room temperature. Forced drying can speed the process at temperatures up to 93°C (200°F).

After application on a part, Chemlok 213 is precured on the part to increase the overall environmental resistance. The large metal parts, which act as heat sinks, are preheated prior to casting.

Chemlok 213 allows a wide tolerance for prebake conditions. Without compromising performance, Chemlok 213 can prebake for as long as 16 hours in temperatures as high as 121°C (250°F).

When used with Chemlok 219 as a primer, both systems will tolerate prebakes as high as 163°C (325°F) for 2 hours.

When using the two-coat system of Chemlok 219 as a primer under Chemlok 213, optimum performance requires prebaking. A minimum of two hours at 121°C (250°F) is recommended. For large parts such as roller cores, baking may extend from four to eight hours at 121°C (250°F), depending upon size.

Cleanup: Remove uncured Chemlok 213 with solvents such as MEK and xylene. Remove cured Chemlok 213 by grit blasting, grinding or belt sanding.

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.

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CHEMLOK® 213

技术说明书

Chemlok® 213是一款单涂表面处理剂,用于帮助和促进浇注型和反应注射型(RIM)聚氨酯弹性体附着至金属。本品是聚合物、固化剂和颜料在有机溶剂系统内形成的混合物。

Chemlok 213还可用于帮助和促进各式各样的聚醚浇注型和聚酯浇注型聚氨酯附着至金属。本品也可以用于促进某些热塑性聚氨酯(TPU)的附着。

特征和优点

用途广泛: 本品可应用于基于TDI和MDI,不同硬度的聚醚浇注型和聚酯浇注型聚氨酯,帮助和促进其附着至金属。

经济: 由于用途广泛,无须库存不同品种的表面处理剂。

使用方便: 大多数情况下仅需一层涂敷,可降低使用成本;可以帮助和促进(RIM)聚氨酯弹性体直接附着至铝或钢,而无需底涂或进行预烘。

工艺兼容性: 可适应各种工艺条件,包括长时间预烘。

耐环境性强: 当与Chemlok 219配合使用时,可增强对于严苛环境的耐受性,包括暴露在盐雾、水和高低温环境中。

节省时间: 使用前或使用过程中无需搅拌,可节省涂敷时间,减少涂敷操作失误。Chemlok 213不会发生沉降,开封后可立即进行浸涂或刷涂。

快速干燥: 干燥迅速,可缩短处理时间,减少涂敷件的库存。

耐久性强: 提供出色强度性能,比聚氨酯基材本身的撕裂强度更高。

弹性体

- 混炼型聚氨酯
- 浇注型聚氨酯
- 热塑性聚氨酯 (TPU)

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。选择适当的化学或机械清洗方法,除去金属表面的锈、腐蚀层或氧化层。

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: 使用前或使用过程中无须搅拌。如果需要稀释,使用Chemlok 248稀料作为稀释剂,彻底搅拌均匀。注意:针对不同涂敷方式的稀释最好通过经验获得。

涂敷: 涂敷Chemlok 213时,应形成均一的薄膜,可刷涂、喷涂或浸涂。为避免涂层起泡,涂敷本品时基材温度不得超过82°C (180°F)。

无论采用何种涂敷方式,Chemlok 213的干膜厚度为19.05-31.75微米(0.75-1.25密尔)。如果反复刷涂或在浸涂时沥干操作不当,会影响性能。

与Chemlok 213配合使用,Chemlok 219是一款优秀的表面处理剂。对于浇注型聚氨酯,Chemlok 219和Chemlok 213的特性是互补的——Chemlok 219为金属提供优良的底涂保护;而Chemlok 213则与RIM、TPU和浇注型聚氨酯结合良好。Chemlok 213还可耐受不同的工艺条件,如长期预烘。二者结合,可以提高对各种环境的耐受性。

典型特性*

外观	蓝色液体
粘度 cps @ 25°C (77°F) Brookfield粘度计 2号转子, 转速30 rpm 秒 @ 25°C (77°F) 3号Zahn粘度杯	100 - 300 20 - 35
密度 kg/m³ (lb/gal)	870 - 910 (7.3 - 7.6)
固体含量, %	20.5 - 23.5
闪点 (Seta), °C (°F)	5 (41)
溶剂	丁酮 (MEK), 乙酸混合物、二甲苯

*典型数据不可作为产品标准之用。

使用Chemlok 219作为底涂时, 首先涂敷Chemlok 219并自然风干。然后涂敷Chemlok 213并自然风干。然后将涂敷件在121°C (250°F)下进行所需要时间的预烘。

干燥/固化 – 覆膜件在室温下自然风干30至60分钟。强制干燥可加速干燥过程, 温度最高可达93°C (200°F)。

工件涂敷后, 对Chemlok 213进行预先固化, 以提升总体的耐环境性。对作为大型金属件, 浇铸前应预热。

Chemlok 213可适应各种预先烘烤条件。Chemlok 213的预烘时间最长可达16小时, 温度最高可达121°C (250°F)而不会降低产品性能。

作为底涂与Chemlok 219配合使用时, 两者均可承受2小时温度高达163°C (325°F)的预烘。

将Chemlok 219作为底涂与Chemlok 213配合作为双涂层体系使用时, 要取得最佳效果, 需要进行预烘。建议在121°C (250°F)的温度下至少预烘两小时。对大型工件 (例如辊芯), 预烘温度为121°C (250°F), 根据尺寸大小, 预烘时间在四到八小时之间不等。

清理 – 用丁酮(MEK)和二甲苯等溶剂清除未固化的Chemlok 213。固化后, 可使用喷砂、打磨或砂带打磨方式去除。

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) 的环境下。储藏或使用时不得靠近热源、火花或明火。

警示信息

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*仅可用于工业/商业用途。*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。

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