

# Chemlok® 481/Curative 44

## Technical Data Sheet

OBSOLETE

Chemlok® 481/Curative 44 is a two-component system used to affix thermoplastic elastomers (TPEs) to metals during the injection molding process. This system can also be used to fabricate hose for cold and hot [54-65°C (130-150°F)] liquids.

### Features and Benefits:

**Versatile** – works on a wide variety of thermoplastic elastomers.

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

**Convenient** – requires only a single coat for most applications. For harsh environments, apply Chemlok 205 as a primer prior to application.

### Application:

**Surface Preparation** – Remove grease, oil, fingerprints, dust, mold release agents, rust and other contaminants from the surfaces to be bonded. Wear chemical resistant gloves. Wipe the surfaces with a clean cloth soaked in a solvent such as acetone, Methyl Ethyl Ketone (MEK) or isopropyl alcohol. On metal surfaces, a suitable alkaline degreasing agent may be used. Rinse metals and allow the surfaces to thoroughly dry.

**Mixing** – Thoroughly stir Chemlok 481. While stirring, add 10 parts Chemlok Curative 44 curing agent, by weight, to 100 parts Chemlok 481. If Chemlok 481 appears thick and gel-like in consistency, heat Chemlok 481 to 49°C (120°F) to lower the viscosity before mixing.

Thoroughly mix the two components before using. Mixed working life is 24 hours.

If dilution is needed, use toluene or xylene at a ratio of 2.5-3.0 parts solvent to 1 part Chemlok 481, by volume. Add solvent while stirring Chemlok 481 to prevent shocking the resin.

**Applying** – Apply Chemlok 481/Curative 44 by spray, brush or dip methods.

Regardless of application methods, the dry film thickness of Chemlok 481/Curative 44 should be 20-37.5 micron (0.8-1.5 mil) for affixing TPEs [6.4 mm (0.25 in) thick or more]. For thinner sections, less material can be used. For smooth surfaces (e.g., plated metals) or where failures to the metal occur, use of Chemlok 205 as a primer is recommended.

**Drying/Curing** – Allow Chemlok 481/Curative 44 to air-dry for 60 minutes at room temperature or hot air-dry for 10-15 minutes at 65°C (150°F).

For maximum performance, preheat the coated inserts to 93-149°C (200-300°F) prior to processing. Use a warm mold or increase the temperature of the melt to help improve performance. For injecting onto rubber or thermoplastic surfaces (e.g., TPE electrical plug onto rubber or plastic coated wire), preheating may not be necessary.

If preheating is not an option, the molded part can be post-heated to enhance performance. After molding, allow at least 24 hours before testing the parts.

**Cleanup** – Use solvents such as xylene to remove Chemlok 481/Curative 44 before heat is applied. Remove cured Chemlok 481/Curative 44 by mechanical blasting methods.

### Typical Properties\*

|                                          | 481                            | Curative 44                     |
|------------------------------------------|--------------------------------|---------------------------------|
| Appearance                               | Straw Yellow Liquid            | Transparent Brown Liquid        |
| Viscosity, cps                           | 400 - 1500<br>@ 38°C (100°F)   | < 10 (typical)<br>@ 25°C (77°F) |
| Density<br>kg/m <sup>3</sup><br>(lb/gal) | 880.7 - 916.7<br>(7.35 - 7.65) | 1010.0 - 1040.0<br>(8.4 - 8.7)  |
| Solids Content by Weight, %              | 17 - 20                        | 47 - 51.5                       |
| Flash Point (Seta), °C (°F)              | 5 (41)                         | 29 (85)                         |
| Solvents                                 | Toluene, Xylene, Acetone       | Xylene                          |

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



ENGINEERING YOUR SUCCESS.

## Shelf Life/Storage:

Shelf life is one year from date of shipment when stored by the recipient in a well ventilated area at 21-27°C (70-80°F) in original, unopened container.

## 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.

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

Values stated in this document represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

Information provided herein is based upon tests believed to be reliable. In as much as Parker LORD has no control over the manner in which others may use this information, it does not guarantee the results to be obtained. In addition, Parker LORD does not guarantee the performance of the product or the results obtained from the use of the product or this information where the product has been repackaged by any third party, including but not limited to any product end-user. Nor does the company make any express or implied warranty of merchantability or fitness for a particular purpose concerning the effects or results of such use.

WARNING — USER RESPONSIBILITY. FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

©2021 Parker Hannifin - All Rights Reserved

Information and specifications subject to change without notice and without liability therefor. Trademarks used herein are the property of their respective owners.

OD DS6071CE 01/21 Rev.0



Parker LORD  
Engineered Materials Group

111 LORD Drive  
Cary, NC 27511-7923  
USA

[www.lord.com](http://www.lord.com)

# Chemlok® 481/Curative 44

## 技术说明书

OBSOLETE

Chemlok® 481/Curative 44是一种双组分表面处理剂,可以促进和帮助注塑成型的热塑性弹性体(TPE)附着至金属。该体系还可用于生产[54-65°C (130-150°F)] 冷热液体的软管。

## 特征和优点:

**用途广泛** – 可帮助和促进多种热塑性弹性体附着至金属。

**易于涂敷** – 通过喷涂、刷涂或浸涂方式可轻松涂敷。

**使用方便** – 大多数应用只需单层涂敷。对于恶劣环境,可在涂敷表面处理剂之前先涂Chemlok 205作为底涂。

## 使用方法:

**表面处理** – 去除待粘接表面上的油脂、油、指印、灰尘、脱模剂、锈和其他污物。穿戴耐化学品的手套。使用沾有丙酮、甲乙酮 (MEK) 或异丙醇此类溶剂的清洁抹布擦拭表面。对于金属表面,也可使用适当的碱性脱脂剂。冲洗金属,然后待其彻底干燥。

**混合** – 彻底搅拌Chemlok 481。搅拌时,向100份 Chemlok 481中加入10份Chemlok Curative 44固化剂(按重量计算)。如果 Chemlok 481看起来太稠且为均匀的凝胶状,则在混合前可将表面处理剂加热到49°C (120°F)以降低粘度。

使用前,彻底混合两个组分。混合后的作业时间为24小时。

如果需要稀释,可使用甲苯或二甲苯作为稀释剂,稀释比例为:1份Chemlok 481兑2.5-3.0份稀释剂,按体积比计算。稀释Chemlok 481时必须边搅拌边稀释,以保证树脂体系的稳定性。

**涂敷** – 通过喷涂、刷涂或浸涂方式可轻松涂敷Chemlok 481/Curative 44。

不论采用何种涂敷方式,Chemlok 481/Curative 44体系的干膜厚度应为20-37.5微米 (0.8- 1.5 密尔)。对于较薄的部件,膜厚可以稍薄一些。对于光滑表面(如电镀金属)或者容易失效的金属基材,建议使用Chemlok 205作为底涂。

**干燥/固化** – Chemlok 481/Curative 44室温下自然风干需要60分钟,或在 65°C (150°F)的温度下热风干燥10-15分钟。

硫化前,可以通过预热金属嵌件93-149°C (200-300°F)以获得最佳性能。对模具进行预热或者升高熔融态材料的温度可提升产品性能。当注塑到橡胶或热塑性弹性体表面时(例如,包橡胶的TPE电插头或包塑线),通常无需预热。

如果不能选择预热,可在成型后对部件进行加热以增强性能。成型后,应等待至少24小时再进行测试。

**清理** – 可使用溶剂(例如二甲苯)去除未经硫化的Chemlok 481/Curative 44。使用机械喷砂方式去除已经固化的表面处理剂。

## 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,在 21-27°C (70-80°F) 的温度下保存于通风良好区域。

## 典型特性\*

|                                     | 481                            | Curative 44                     |
|-------------------------------------|--------------------------------|---------------------------------|
| 外观                                  | 浅黄色液体                          | 透明的棕色液体                         |
| 粘度, cps                             | 400 - 1500<br>@ 38°C (100°F)   | < 10 (typical)<br>@ 25°C (77°F) |
| 密度<br>kg/m <sup>3</sup><br>(lb/gal) | 880.7 - 916.7<br>(7.35 - 7.65) | 1010.0 - 1040.0<br>(8.4 - 8.7)  |
| 固体含量, %                             | 17 - 20                        | 47 - 51.5                       |
| 闪点 (Seta), °C (°F)                  | 5 (41)                         | 29 (85)                         |
| 溶剂                                  | 甲苯、二甲苯、丙酮                      | 二甲苯                             |

\*典型数据不可作为产品标准之用。



ENGINEERING YOUR SUCCESS.

## 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。

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。

本公司未对每批生产的材料均进行所有的测试, 因此本文件所提供的数值仅为典型值。如欲获取有关特定产品最终用途的正式产品规格, 请联系客户支持中心。

此处提供的信息均基于本公司认为可靠的测试。对于他人会如何使用这些信息, 派克洛德无法控制, 因此本公司并不保证可以获得何种结果。此外, 如果本品被任何第三方 (包括但不限于任何产品最终用户) 重新包装, 则派克洛德不保证本品的性能或使用本产品或本信息所获得的结果。本公司也不对本品的适用性或特定用途的适用性 (关于上述使用的效果和结果) 做任何明示或默示保证。

警告—用户责任。不当选择或不当使用本文所提及的产品或相关产品会导致死亡、人身伤害和财产损失。

本文件以及派克汉尼汾公司、其子公司和授权经销商提供的其他信息为具有技术专长的用户进行进一步调查提供了产品或系统选项。

用户可通过自行分析和测试, 独自负责就系统和组份作出最终选择, 并确保符合有关性能、耐用性、维护、安全和警告方面的所有应用要求。用户必须分析应用程序的所有方面, 遵循适用的行业标准, 并遵循当前产品目录中关于产品的信息, 以及派克或其子公司或授权经销商提供的任何其他材料。

在某种程度上, 派克或其子公司或授权经销商基于用户提供的数据或规格提供组份或系统选项, 用户须负责确保这些数据和规格对所有应用程序和组份或系统的合理可预见用途适用且信息完备。

©2021 Parker Hannifin - 版权所有

信息及规格以不时更新为准, 恕不另行通知, 亦不承担由此产生的责任。  
本文件中使用的商标为相应所有人的财产。

OD DS6071CE 01/21 Rev.0



Parker LORD  
工程材料集团  
111 LORD Drive  
Cary, NC 27511-7923  
USA  
www.lord.com

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