

SEALS

TECHNOLOGY



0117

客户杂志 *Magazine for customers and partners*

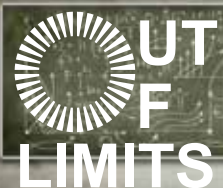
BRAND NEW

POLYURETHANE U505

Out of Limits

Just in Time

Reach & SVHC





尊敬的读者，

自上次“密封科技”出版已经过去三个月了，我很高兴能赶上2017年的第一个季度结束前又给大家带来一些好消息。

自年初以来，很多地区的经济发展依然具有很多积极的情绪和投资意愿，这点根据来自世界各地对数控机床的询价和订单数量就可以体现，同时半成品和密封圈的订单数也非常可观。

以下是关于材料科研方面有趣的消息：我们所研究的新材料U505-P79良好地将聚氨酯和弹性体材料的积极属性结合起来，使其发挥更高的灵活性。在不久的将来您就可以订购，详情请参见第四及第五页的内容。

更多材料方面讯息是关于REACH/SVHC以及HN900进行酸气测试后成功取得了证书。

第一个项目报告是在“无限限”系列方面的创新。在这份报告中所述的项目是为了满足特定密封技术或特殊制造技术的需求，如果您对此项目产生兴趣我们将深表愉快。

同时我也想论述一个非常重要的话题，自2017伊始乃至未来都会和我们息息相关：随着经济持续积极的发展，一些原材料厂的相继倒闭所导致相关原材料的欠缺，导致我们大部分的供应商提高价格，普遍涨幅高达百分之十以上，这些影响很快就会显现出来。另外，市场传言这波价格上涨将只是2017年的开端，而第二波也即将到来。我们正努力和我们的供应商进行协商，尽可能延缓价格上涨的时间。我向您承诺一定会尽我们所能减少价格上涨，将我们的产品交到客户的手上，这一点是相当有必要的。未来如何发展仍有待观察。

我们的首要任务，一如既往的是提高我们产品的灵活性以及服务质量。与我们的客户保持良好的合作关系，我相信今年也一定能与您共享成功和高效的合作。

此致
Johann Glocknitzer

Dear Readers,

It's 3 months already since the last edition of our "Seals Technology", and I'm delighted to report on a lot of news at Seal Maker by the end of the first quarter of 2017.

Since the start of this year there has been positive sentiment and willingness to invest in many areas of economic development. This is reflected by the increase of the number of enquiries and orders for CNC machine systems from various parts of the world. The Incoming orders for semi-finished products and seals are also very encouraging.

There is interesting news in the field of material development: our newly developed material U505-P79 combines the positive properties of elastomers with those of polyurethanes offering a high degree of flexibility in its application areas. The material can be ordered immediately. Read more about it on pages 4 and 5 of this issue.

Further topics concerning materials in this magazine are detailed information on REACH/SVHC and the new certificate for our HN900 after its successful sour gas testing.

New in this issue is the presentation of the first project of our "Out of Limits" series. In the scope of this report we present projects with special requirements that demand specific sealing technology or special manufacturing techniques. I would be delighted, if one or the other project is interesting for you.

I'd also like to address a very important topic which has already occupied us since early 2017 and will certainly continue to concern us: The positive economic development, the closure of some raw material plants and the associated scarcity of raw materials caused almost all our suppliers to announce price increases, generally in the double-digit percentage range. These increases are expected to come into effect soon. In addition, it has been generally announced that this is only the first wave of price increases in 2017. A second rise in prices seems quite realistic. We are currently in intensive negotiations with our main suppliers to keep the price increases as low and as late as possible. I would like to assure you that we will do our utmost to minimize the necessary price increases of our products and to pass them on to our customers only to the extent that is absolutely necessary. The further development remains to be seen.

As our top priorities are always improving and increasing the flexibility of all our products and services, and maintaining an amicable relationship with our customers, I'm convinced that this year we will continue to enjoy a highly effective and successful collaboration with you.

Yours,
Johann Glocknitzer

Just in Time

去年年底，Seal Maker 除了展示其高效灵活之外还展示了重中之重以方案为导向的一面。一家大型的国际技术公司在组装卡普兰式水轮机的转子叶片密封件时发生了突发的紧急情况，于是他们向我们寻求帮助。

Seal Maker 能够在一周时间内创造并设计出全新的密封件，并进行生产加工最后完成现场焊接工作。这个了不起的项目向我们展示了跨部门的配合对于客户的需求带来了积极的效果。

At the end of last year, Seal Maker was able to demonstrate its speed, flexibility and, above all, its solution-oriented approach. A large international technology group encountered a sealing problem during the assembly of the rotor blade seals of a Kaplan turbine. They then contacted us with a request for support.

Seal Maker was able to create a completely new, innovative seal design, manufacture it and finally weld and assembled it on site - all within just one week. The accomplishment of this project can be taken as a demonstration of the positive effect an excellent cross-department co-operation can have on the urgent needs of a customer.



Sour Gas Testings

为了确保石油和天然气工业项目的安全及成本效益，对于气体快速减压 (RGD) 和酸气测试必须严格遵守 NORSKOK M 710 测试要求 (ISO 23936)。我们的材料(HN900-B85-RGD, HN901-B85-RGD, F800-B85-RGD和 U520-OR95-HT的报告)已经根据RGD测试要求取得了相应的证书

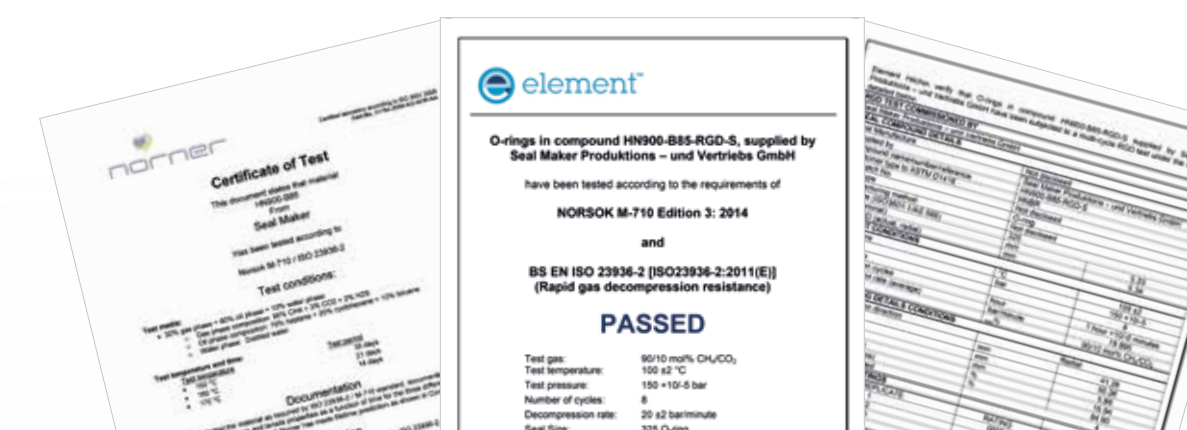
此外在一个有意思的客户案例中，HN900材料接受了大量且昂贵的酸气测试。目的是为了预估它的工作周期和由此而对应的弹性体密封件的运用可能性。酸气是一种包含硫化氢、甲烷和二氧化碳的混合气体，常见于石油及天然气中。在与化学聚合物的化学反应中，这些可能会被损坏。为了确保弹性体密封件的操作安全性，由挪威的Nomer实验室根据业界标准针对HN900材料的特别测试是非常有必要的。它的物理性能，如重量、体积、硬度、断裂伸长性在各个不同的温度段进行测试。

根据NORSOK M-710/ISO 23936标准的成功评估确认了HN900材料在油气行业中的潜在

To ensure sufficient safety and cost-effectiveness in oil and gas industry projects, it's important to meet the strict NORSKOK M-710 test requirements (ISO 23936) for rapid gas decompression (RGD) and sour gas testing. Our materials (reported about HN900-B85-RGD, HN901-B85-RGD, F800-B85-RGD and U520-OR95-HT) have already been subjected to the RGD test and are certified accordingly.

In addition, during one interesting customer project, the material HN900 was subjected to the extensive and expensive sour gas test. The purpose of this is to estimate the service life and consequently the application possibilities of elastomer seals. Sour gas is a gas mixture that consists, among other things, of hydrogen sulfide, methane and also carbon dioxide and is found mainly in oil and gas sources. During chemical reactions with polymers, these can be damaged. To ensure the operational safety of elastomer seals, special tests are required, which, in the case of HN900, were performed by the Norner test laboratory in Norway in accordance with the defined standards. The mechanical properties, such as specific weight, volume, hardness and elongation at break, were tested in the different temperature stages.

The successful evaluation of the material HN900 according to NORSOK M-710 / ISO 23936 confirms its potential application possibilities in the oil and gas industry.



SEALERS

Polyurethane U505

Combines the best of both!

密集的研发工作使得客户始终可以站在科技的前沿。Seal Maker首次呈献U505-P79这款硬度为80 Shore的弹性体产品，在标准的车削参数下呈现了令人满意的面表效果。材料结合了弹性体及聚氨酯的优良特性在适用的领域中展现了高度的灵活性。以下为聚氨酯系列产品的优点

- 优异的机器性能
- 优秀的耐磨性
- 很好的耐化学性
- 低压范围内出众的密封效果(比如气动)
- 参差不齐的沟槽/操作面的均衡性
- 几乎没有直接限制(预应力要素)

经过长期测试及数月的研发新材料U505已经准面世准装代发。内部及外部的测试均已完成。此外抗热老化、耐水解及抗热成型均已测试。对于反弹的抗压性、抗撕裂性及耐磨性的测试结果非常良好。动力机械测试结果通过大量的测试数据取得。

Intensive research and development work ensures that customers are always kept up to date with technology. With U505-P79, Seal Maker presents the first polyurethane material under 80 shore, which provides pleasing surface results even with standard machining parameters. The material combines the positive properties of elastomers with the positive properties of polyurethanes and is characterized by high flexibility with regard to possible application areas. Inherent to the family of polyurethanes the following advantages can be seen:

- excellent mechanical properties
- outstanding abrasion resistance
- very good chemical resistance
- excellent sealing effect in the low-pressure range (e.g. pneumatics)
- equalisation of irregularities of the housing/counter face
- almost no diameter limits when the new PU505 is used for the preloading element (instead of NBR)

Long-term tests and a monthly development process were performed as to finally reach market readiness for the new material U505. Both internal and external tests were performed. In addition to resistance and heat ageing, hydrolysis resistance and thermoforming resistance were also tested. The tests for rebound resilience, tear propagation resistance and abrasion resistance also showed very positive results. Dynamic and mechanical analyses concluded the overall program of extensive tests.

Brand new material

... 优异的品质

- 优秀的耐磨性
- 低硬度材料出众的密封效果
- 高拉伸延展性

... 广泛的运用范围

- 良好的可焊性
- 适用于大管径

.... 灵活的生产加工

- 缩短交货期
- 快速可能性

... excellent QUALITY

- outstanding abrasion resistance
- very good sealing effect due to low material hardness
- high elongation at break

... wide RANGE OF APPLICATIONS

- very good weldability
- suitable for large diameters

.... flexible PRODUCTION

- short lead times
- fast availability



ABRASION SEAL MAKER MATERIALS

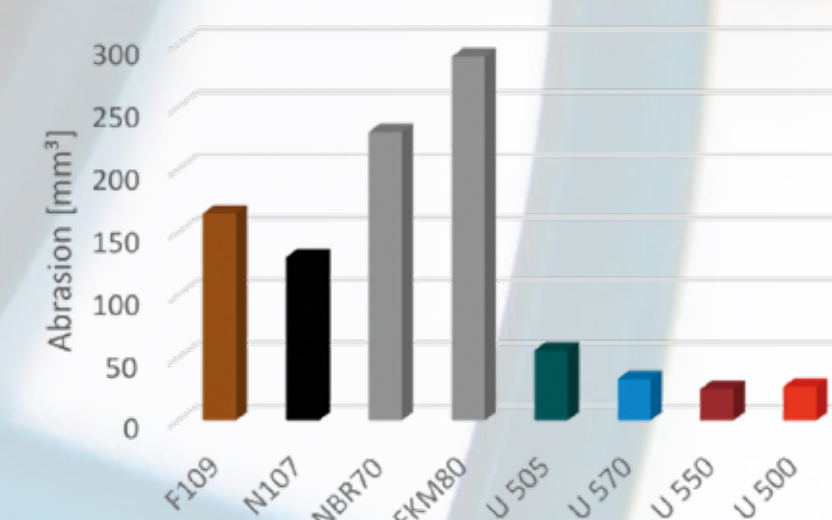


图: Seal Maker 材料与标准材料耐磨性的比较

Figure: Abrasion resistance of Seal Maker materials compared to standard materials

ELONGATION AT BREAK SEAL MAKER MATERIALS

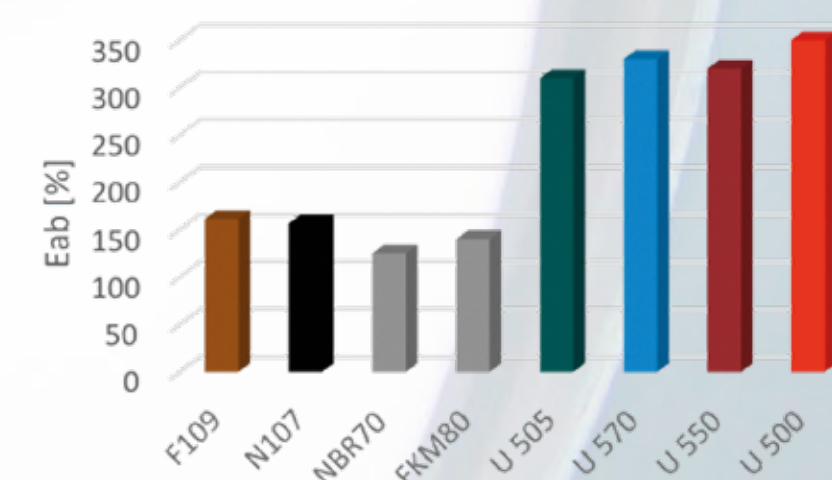


图: Seal Maker 材料与标准材料耐拉伸延展性的比较

Figure: Elongation at break of Seal Maker materials compared to standard materials

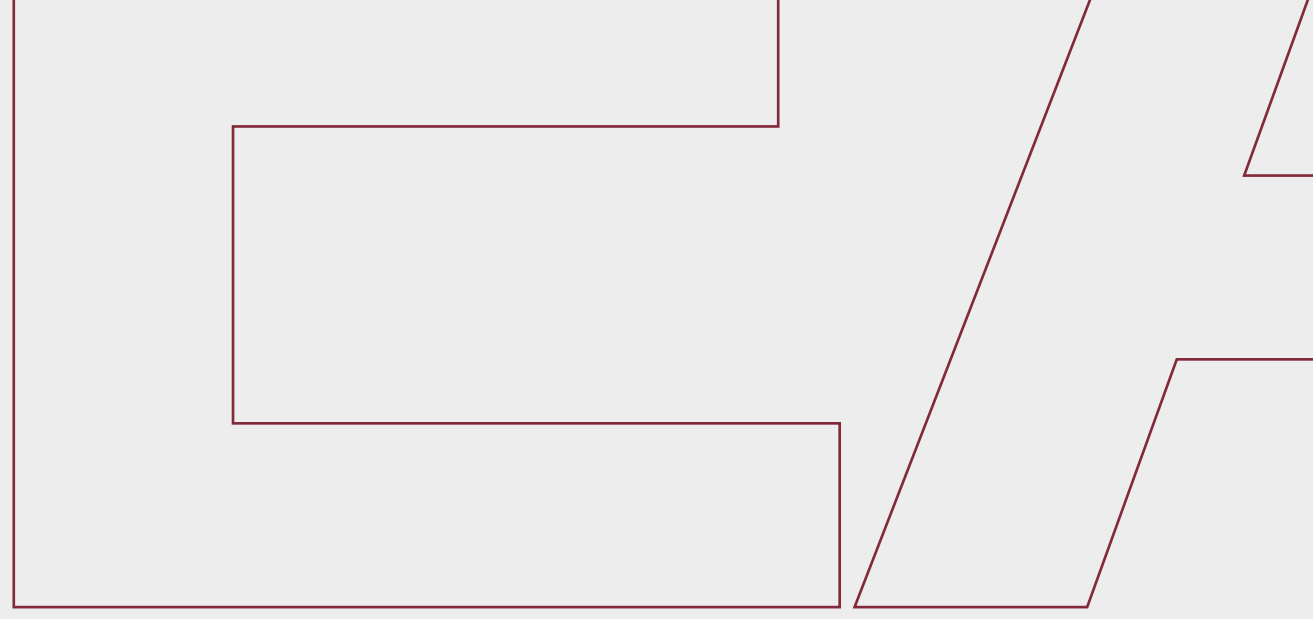
今天就订货!!

新材料U505-P79现在就开始订货: »sales@seal-maker.com

Order now!

The new polyurethane material U505-P79 can be ordered from us now:
»sales@seal-maker.com

OUT OF LIMITS



Seal Maker最重要的优势之一聚焦客户。根据客户特殊需求而量身定制的生产并非个例。我们最新的“不受限”的范围中，我们对于特殊需求的项目呈现特别的解决方案。可以涉及到形状、尺寸、型号、直径、公差和特制材料。我们重新认知于无限制的定制并期待着密封科技的新挑战！

One of the greatest strengths of Seal Maker is our customer focus. Customised manufactures based on customer-specific enquiries are not individual cases. In our new “Out of Limits” range, we now present projects with special requirements that demand specific solutions. These can relate to shapes, sizes, profiles, diameters and tolerances as well as customer-specific materials. We recognise no limits and look forward to meeting the challenges of sealing technology!

U520-OR95-HT	
项目启动日期 Date of project start	9.11.2016 客户指南 9.11.2016 Customer's guide
使用材料 Material used	U520(客户预定此款材料因为它的抗热性，温度运用至130°C) U520 (customer ordered this material due to its heat resistance, temperature application range up to 130°C)
特征/挑战 Special features/challenges	<ul style="list-style-type: none"> • 高度 • Height • 特殊形状 • Special shape • 完工后精确的表面 • Precise surface finish • 凹槽 (根据高度) • Recesses (due to height)
密封件交货期 Delivery of the finished seal	30.11.2016 - 件密封件交付客 30.11.2016 - 11 seals sent to customer



Seal Maker®

The system for flexible seal production

速麦密封科技(上海)有限公司

UPDATE CHINA



我们之前已经数次提及了上海。经过几个月的努力付出，五月之后我们的上海新网点开始运营。一台SM-L500e升级版已经成功安装调试，另外一台SML500e正在去往远东的途中。

仓库已经建成，相应的ERP系统也已经安装。在长期的组织筹备中，我们踌躇满志的中国团队为即将到来的大量订单蓄势待发—我们希望这是成功的开端。

We have reported about Shanghai several times already. The hard work of the last few months has paid off, and from May onwards our new site will be running in full operation. One SML500e Plus has already been successfully installed, and another SML500e is on its way to the Far East.

The warehouse has also been finished and a corresponding ERP system has been installed. The highly motivated team in China is looking forward after long organisational preparations to numerous incoming orders – we wish them a successful start!

Statement Reach & SVHC

The ECHA, 欧洲的化学品管理局，帮助公司遵从于关于化学品安全使用的法规。除了足够的化学品信息外，还包括所谓的“关注内容”。所列内容被分类为“高度关注” (SVHC)的品类新增4个内容增至此科目下173个。为了适应不断变化的安全标准，Seal Maker的性能表及证书也相应的及时调整。当然Seal Maker 没有根据REACH和 SVHC标准一模一样的材料，可能也没有这样的材料。所有的文件可以在我们的网站客户浏览区域找到。

更多的ECHA及分类咨询可以查询: <https://echa.europa.eu/>

The ECHA, the European chemicals agency, helps companies to comply with the legislation on the safe use of chemicals. In addition to sufficient information about chemicals, the agency also includes so-called “substances of concern”. The list of substances classified as substances of “very high concern” (SVHC) has been expanded with 4 additional substances, so that now 173 chemicals belong to this category. In order to meet the changing safety standards, Seal Maker’s datasheets and certificates have been extended and updated accordingly. Of course, none of the Seal Maker materials includes such substances, they comply fully with the applicable guidelines according to REACH and SVHC. All documents can be found in the Customer Area on our website.

Further information on the ECHA and the classification of substances can also be found at: <https://echa.europa.eu/>

Review Arabplast 2017

2017年1月8日至10日，第十二届橡胶展会在迪拜世界贸易中心举行，Seal Maker也参加了这次展会。来自于40多个国家1000多名展商带来了他们最新的设备及科技。

为期一天的技术研讨会为有兴趣的客户提供了Seal Maker 最新的发展及革新。一些客户参与了聚焦于特殊密封解决方案的活动，如水泥行业。总而言之，展会收获了大家的获评及正面的反馈。

更多橡胶展会资讯请登录 <http://www.arabplast.info/>

From 8.-10. January 2017, the 12th Arabplast was held at the Dubai World Trade Center, where Seal Maker was also represented with a booth. More than 1,000 exhibitors from over 40 countries presented their latest machines and technologies.

A one-day technical seminar also provided interested customers with insights into the newest developments and innovations from Seal Maker. Some customers participated in the event focusing on special sealing solutions (cement industry). All in all, the workshop attracted praise and positive feedback.

More information about Arabplast can be found at <http://www.arabplast.info/>



ECO-FRIENDLY

go paperless

一个真正了不起的成就

电脑办公取代纸质办公提升了办公效率，也为环境保护做出了巨大的贡献。Seal Maker 无纸化的推进在节约了惊人的工时。

- 2015年，在销售部有248个活页夹。这些文件夹每个最多夹着500页的纸，等同于总共250000页打印纸。在切换到无纸化之后，2016年仅需27个文件夹，用纸减少到13500页。与2015年相比，2016年销售部门节省了37%的印刷费用成本
- 更快地检索文件，减少一些工作环节为销售部门节省了不可估量的成本。
- 电子单据的方式可以获得更多的节省：邮寄成本在2016年下降80%。此外信封的费用也是成本降低的因素之一。

A truly remarkable achievement!

Computer-based methods instead of paper-bound documents lead to increased efficiency and contribute significantly to environmental protection. The transition to "paperless" at Seal Maker has also shown the remarkable savings achieved by consistent changes in workflows:

- In 2015, there were 248 ring binders in the sales department. Such a folder holds approximately 500 pages of paper, which equates to approximately 250,000 printed pages. After the switch to "paperless", only 27 new folders were created in 2016, which means only 13,500 printed pages of paper. The sales department has thus significantly reduced the overall printing costs in the company with a cost saving of 37% in 2016 vs. 2015.
- The faster retrieval of documents and the reduction of some work steps have saved additional, non-measurable costs in the sales department.
- Further savings could be achieved by switching to e-billing: postal costs were reduced by approx. 80% in 2016. The saving of envelopes also results in additional cost reductions.



"Please consider the environment before printing!"

KONNICHIIWA!



2017年1月11日日本大使在其夫人的陪同下代表日本外贸促进组织JETRO，考察了在Pöttelsdorf的Seal Maker。

此次考察的目的在于更好的了解Burgenland的商业布局。在我们详尽的公司陈述中，Koinuma大使对于Seal Maker 全球的密封件业务有了一个纵览。他对于Burgenland企业的国际市场及客户网络非常地感兴趣。

On 11 January 2017, the Japanese ambassador, Kiyoshi Koinuma, accompanied by his wife and representatives of the Japanese foreign trade promotion organisation, JETRO, undertook a company visit at Seal Maker in Pöttelsdorf. The aim of this visit was to gain an insight into the Burgenland business landscape. Apart from a detailed company presentation, Ambassador Koinuma was able to get an overview of Seal Maker's international seal business. He was very interested in the customer network and the international markets of the company situated in Burgenland.

