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LEADER IN ELASTOMER
CUSTOM MIX

長泓膠業集團
CHANG HORING RUBBER GROUP

願　景

成為亞洲最能與客戶共同成長的混鍊膠廠，追求服務與專業領先

使　命

以亞洲為中心放眼全球，提供各種客製化混鍊膠，以專業能力幫助各產業對橡膠相關需求，做為長期且值得信賴的技術及產能提供者

核心價值觀

追根究柢、勤勉樸實、客戶優先、誠信積極

核心競爭力

整合專業技術快速滿足客戶需求

Vision

Through the pursuit of technical expertise service and professional leadership, we hope to become Asia's premier elastomeric rubber mixer and growing together with customers.

Mission

Centering on Asia with global perspective, we provide customized-mixed rubber compound, assisting rubber issues from all walks of lives, being a long-term trustworthy supplier of technology and productivity.

Core Values

Conclusive analysis, down-to-earth diligence, customers first, integrity and proactivity

Core Competitiveness

Integrated expertise to meet customers' needs quickly.

Future 展望 未來

態度決定地位　思路決定出路

Attitude is the status of ideas determine

營運方針

現除了位於彰濱工業區之本廠外,另在高雄大發工業區,台北八里工業區,中國上海松江工業區及中國的東莞都設有工廠,整體配置11條完整生產線設備,專業混煉生產,年產量20,000噸以上,並於2001年九月通過ISO9001國際品質認證。

為達成客戶要求並做好全面服務,長泓提供全系列混煉膠的銷售,適用於生產全系列油封、O型圈、特殊橡膠件、墊片、密封圈,閥類製品,Medical-Grade Silicone(USP),食品級FDA-materials,飲用水製品 water-drink (NSF,KTW,WRC),等成品需求外,長泓同時提供Total solution之服務,除了提供專業橡膠混煉設計開發外,並同時參與後段制程討論及建議,讓客戶能夠做精確的報價及製程控制以生產出更具市場競爭性的產品。

人生有夢・逐夢踏實

由長泓膠業的發展史裡,可以知道我們是從零市場佔有率開始做起的,秉持著高品質產品及高效率服務為後盾, 在短短的時間內,我們一躍成為橡膠混鍊市場的領先廠家.

我們將持續推動這股原動力來服務客戶以確保客戶市場上競爭優勢.

在此謹代表長泓膠業股份有限公司海內外的工作同仁感謝您給我們一個展現的機會,我們將向您證明,長泓永遠是你最有價值的合作夥伴~

董 事 長

廖重義

CHR GROUP Managment Concepts

Managment Concepts

Chang Horing Rubber Group was founded in 1995. We have been very well developing ourselves by the guidance of the goal of meeting our clients' requirements since then.

To achieve clients' requirements and to provide overall services, CHR contributes all types of compound rubber suitable for producing various O rings, special rubber products, pads, sealing rings, medical-grade silicone(USP), FDA materials, water-drink products (NSF,KTW,WRC). CHR also provides Total Solution services. Except for assisting our clients in the professional development and research of compound rubbers, we do help our clients for their post-processes which consist of the control of engineering process and how to make precise quotation so as to have their products be more competitive in the market.

Only With Actions Will Dreams Come True

Our company CHR started with zero market share in the industry. And in a very short period of time, CHR has become the leader in the rubber compounding industry with the largest market share.

We can say that this was achieved only by providing companies such as yours, with the highest quality rubber products according to your most stringent requirements.

We are dedicated to continuously serving your company in its most competitive market environment. As President of CHR, I thank you for giving us the opportunity to be part of your business plans. We'll do our part to ensure that CHR will always remain your most valuable partner over the years.

President

Hubert Liua

汽車工業 (Automotive Industry)

符合各項汽車材料規範，如DBL, FORD, GMW, VW2.8.1 等汽車規範。

Our material meets all kinds of automotive specification, such as DBL, FORD, GWM, and VW 2.8.1 standards.

化工產業 (CPI)

提供符合耐化性非常好的橡膠材料。FFKM, AFLAS, ETP, FKM, EPDM

Offers outstanding resistance to aggressive media such as hot organic and inorganic acids, such as FFKM, AFLAS, ETP, and FKM.

石油與天然氣 (Oil & Gas)

提供可符合RGD H_2S 的產品，供鑽油井相關產業使用。

Provides material meets RGD requirement and stands H2S environment, especially for drilling industry.

消費性產品 (Consumer Product)

多樣性的產品選擇，如廚房用品、鍵盤、錶帶等消費品。

There are Various materials selection, like Kitchen Ware, Keyboard, and Watch Band.

航太工業 (Aerospace)

提供耐高低溫，且耐航空燃油的橡膠材料，如FVMQ, FKM等材料。

Offers High and Low temperature and aerospace fuel resistance rubber product, like FVMQ and FKM.

重工業制品 (Heavy-duty Industry)

用於挖土機、堆高機等產業。已被客戶廣泛使用於耐高壓油封及V型環等產品。

Already widely used in equipment for construction, our rubber mainly for Oil Seal, V-ring, and hydraulic rubber parts.

食品及飲料 (Food & Beverages)

提供符合食品FDA及各國飲用水WRAS, KTW, ACS,KIWA, NSF等飲用水認證。

Provides material already certified by FDA, WARS, KTW, ACS, KIWA, and NSF for drinking water application.

鐵路系統 (Rail Transportation)

即將成為鐵路產業的全解決方案提供者，例如煞車系統與傳動系統。

Being rail transportation total solution provider, including breaking system and transmission system.

制藥工業 (Pharma)

每一批矽膠材料都有通過USP Class VI。

Our silicone rubber for medical purpose with USP Class VI certified, and done ISO-10993 selected chapter for every batch.

半導體產業 (Semiconductor)

提供FFKM, FKM, AFLAS, FVMQ橡膠材料生產Bonding Slit Valve Door及O型環應用在半導體產業。

CHR provides such as FFKM, FKM, AFLAS, and FVMQ rubber, widely used in semiconductor manufacturers.

全 面 品 質 管 制

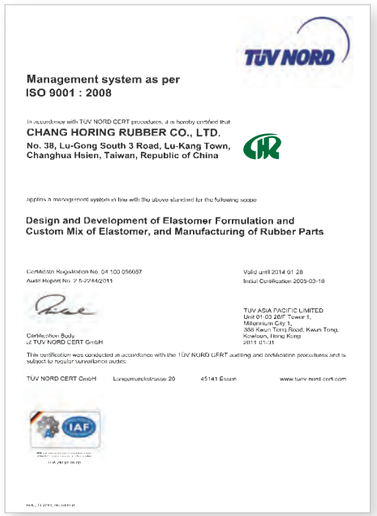
配合全廠品檢取樣輸送設備，品檢人員能夠落實每一批生產膠料，進行全面品檢再行出貨，提供穩定性極佳的膠料。

為符合客戶對品質的各項要求，從原物料到出貨的各項品質管制，滿足客戶對於高品質混練橡膠的各項要求。

Quality Control

To offer excellent rubber products and guarantee quality of every batch, our quality control department will follow from incoming to final process of quality control.

As mentioned quality process, CHR performs hardness (IRHD, Shore A), Rheometers, density, compound dispersion, physical property tests.



TÜV NORD

Management system as per ISO 9001 : 2008

In accordance with TÜV NORD CERT procedures, it is hereby certified that

CHANG HORING RUBBER CO., LTD.
No. 38, Lu-Gong South 3 Road, Lu-Kang Town, Changhua Hsien, Taiwan, Republic of China

applies a management system in line with the above standard for the following scope

Design and Development of Elastomer Formulation and Custom Mix of Elastomer, and Manufacturing of Rubber Parts

Certification Regulation No. 04 100 056657
Audit Report No. 7 5 07442011

Valid until 2014 01 28
Initial Certification 2005-03-18

Certification Body
at TÜV NORD CERT GmbH

TÜV ASIA PACIFIC LIMITED
Unit 01 03 28/F Tower 1,
Millennium City 1,
392 Kwun Tong Road, Kwun Tong,
Kowloon, Hong Kong
2011 12 21

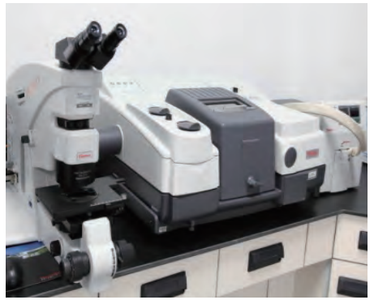
This certification was conducted in accordance with the TÜV NORD CERT auditing and certification procedures and is subject to regular surveillance audits.

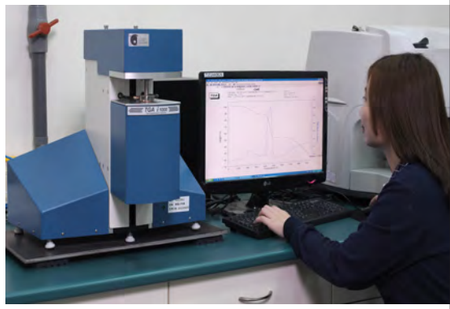
TÜV NORD CERT GmbH Langemarckstrasse 20 45141 Essen www.tuev-nord-cert.com

IAF

材 料 研 發

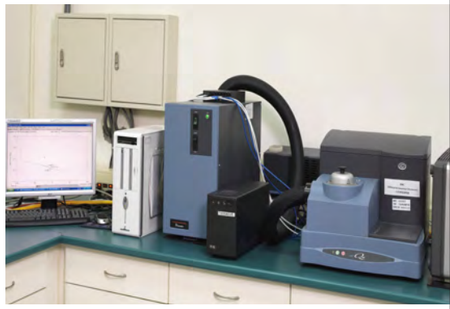
長泓不斷地投資研發設備如：DSC、TMA、TGA、FTIR、GC/MAS and XRF(RoHS)等分析儀器，並垂直整合上下游原物料，由專業研發團隊共同投入研發出更先進的橡膠材料，提供給每一位長泓的優質客戶。

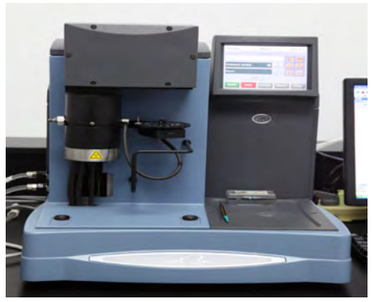




Material Development

To supply customer excellent and stable rubber, CHR already owns DSC, TMA, TGA, FTIR, GC/MAS, and XRF (RoHS) analytical Instruments. And our R&D department keeps increasing budget on the latest instruments. CHR develops advanced material with supply chain to our valued customer.





TAF 實　驗　室

CHR擁有專業的實驗室並取得國際認證TAF(ISO 17025)證書，完整的測試設備並可以符合美國ASTM,歐洲ISO,日本JIS,德國DIN橡膠標準。具備公信力的實驗數據，幫助客戶更快速取得國際客戶對於橡膠的嚴格要求，提供客戶最值得信賴的各項技術資料。

TAF Laboratory

Testing I aboratory
1050

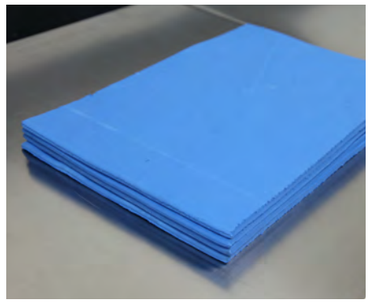
CHR owns professional TAF (ISO17025) certificated laboratory.

Our testing equipment conform to ASTM, ISO, JIS, DIN rubber standards. Creditable testing data helps customer to stand strictly standard. Your request is our duty.

FKM預混膠生產線

由於極地氣候影響，全球對於橡膠的需求日漸嚴苛，透過上下游供應鍊的整合，由專業團隊針對國內外客戶對於FKM材料提供如渦輪增壓管，O型圈等產品，更進一步研發極低溫的FKM材料及全氟膠料，全面符合客戶需求，並能依客戶屬性獨立研發適合客戶製程的氟橡膠材料。

CHR GROUP Fluoroelastomer Production-line



FKM Production-line

Upstream and downstream supply chain integration, CHR team design a FKM materials for application such as Turbo Charge Hose (TCH), O-ring, Oil-seals, boots…etc. We also working on ultra-low temperature FKM, and FFKM, designing customized-formulation to fully reach customer's requirements.

自動化劑量系統

針對汽車工業，航太客戶對於材料追溯能力的要求，長泓膠業投入了自動倉儲及計量系統，大大提升作業流程及混煉膠品質穩定性，先進的ERP電腦系統及條碼系統，滿足客戶對於橡膠控管要求並能安心使用長泓的混練膠。

Auto-dosing System

Traceability plays an important role in automotive and aerospace industry. CHR invests auto-dosing system to simplify processing and improve quality tremendously. Advanced ERP and **Barcode** system, relieve customers' quality concern. Our quality is your safety.

物 料 管 理

可容納12000噸的倉儲空間，並採取先進先出的管理方式，以即時滿足客戶訂單需求。原物料更選用國際知名品牌提供一致性品質。我們相信唯有讓客戶放心生產，才能協助客戶取得更多訂單。

Inventory Management

Warehouse, with capacity of 12,000 tons, follows FIFO method to fulfill order instantly. In additional, we choose well-known brand to ensure identical quality. We believe the smoother production you have, the more order you will win.

CHR for our living Earth

從原膠到各項化學品，長泓持續不斷的跟隨歐洲對於環保材料的要求，如歐盟的REACH/PAHs/RoHS更法規要求。更進一步對於節能省碳進而導入ISO 50001能源管理系EnMS，為我們共同居住的地球盡一份力量。

We persist to involve chemicals that we are applying to be compliant with the latest requirements of environmentally friendly materials, such as REACH, PAHs, and RoHs in Europe. We strive after Energy Saving and Carbon Reduction and introduce ISO 5001 known as EnMS, energy management systems, into CHR group, to do our bit for the Earth.

Formulation compliant with:

※ Polymer & Ingredients

※ RoHs (Restriction of Hazardous Substances)

※ PAHs (Polycyclic aromatic hydrocarbon control)

※ REACH (Registration, Evaluation, Authorization and Restriction of Chemicals)

※ Starting for ISO 50001 certification (Energy Management System, EnMS)

CHR各項原物料均可符合歐洲環保，配方提供客戶符合國際材料認証要求如

DVGW EN681, EN682, EN549, EN14241-1, EC_1935 2004, FDA, 3A(Sanitary Standards)等等…

CHR's polymers and ingredients all can meet EU's environmental regulation, formulation also compliant with standard follow as;

EN681, Material requirements for pipe joint seals used in water and drainage application

EN682, Material requirements for seals used in pipes and fittings carrying and hydrocarbon fluids.

EN549 Natural gas materials, Germany

EN14241, Elastomeric seals and elastomeric sealants, Germany

EC 1935_2004

FDA CFR 177.2600

3A, Sanitary Standards, USA

FDA WRAS APPROVED PRODUCT DIN DVGW CERT UL NSF 3A

ACS EN549 FMVSS 302 UL 157 W270 KTW KIWA

如何挑選密封件用之橡膠材料

在選用密封件用之橡膠材料時，
須考慮幾種重要的指標；分述如下：

一、使用條件之考量

1.須接觸的物體（包含液體、氣體、固體及各項化學藥劑）
2.溫度區間（最低及最高溫度）
3.壓力區間（密封件承受壓力時的最低壓縮比率之考慮）
4.靜態或動態使用之考量

二、設計需求考量

1.組合之考量
2.使用中可能之化學反應考量
3.使用壽命考量極可能失敗原因檢討
4.組件潤滑度及組裝方式考量
5.公差方面考量

三、檢驗需求考量

1.定義出檢驗標準
2.決定樣本確認之需求性
3.設定允收標準
4主要密封表面設定

四、材質規範之選擇

1.決定材質規範之選用如美國ASTM,
德國 DIN,日本 JIS...等
2.與供應商討論，定義膠材之選用
3.選用供貨品質穩定供貨商

五、成本之考量

選用適合之膠料，避免選用成本高
且不符實用之膠材，
造成成品無法發揮密封功能，
無論是天然或人工合成之橡膠均擁有
一般之橡膠特性，如受壓縮之後彈力
恢復性,耐曲折性,耐擠性及對氣體液體
之耐滲透性，每一類之橡膠彈性體均有
他獨特之性能，同時藉由橡膠配方之
組合物也能對其性能表現產生影響。
目前有超過二十種以上之橡膠彈性體,並廣泛被使用在
各類材料需求,同時經由專業混鍊廠之配方設計及混鍊,
更能提供符合各項工程需求，硫化作用使橡膠由熱
可朔性混合物轉成熱固性之期待形狀，交鏈作用
(Crosslink) 提供'橡膠分子鏈結力量及彈性
予密封件發揮性能,因此密封件之設計者與營造者及
膠料供應者互相討論決定使用材料是非常重要的。

FL 氟素硅膠 (FVMQ)
Fluorinated Silicone Rubber
ASTM代號: FK

HN 氫化丁腈膠 (HNBR)
Hydrogenated Nitrile Rubber
ASTM代號: DH

KF 氟素橡膠 (FPM,FKM,VITON)
Fluoro Carbon Rubber
ASTM代號: HK

SE 硅橡膠 (VMQ,SI)
Silicone Rubber
ASTM代號: FC, FE, GE

VA 乙烯-丙烯酸膠 (E/A)
Vamac(Ethylene/Acrylic) Rubber
ASTM代號: EE

EC 氯醇橡膠 (ECO)
Epichlorohydrin Rubber
ASTM代號: CE

AC 丙烯酸酯橡膠 (PA,ACM)
Polyacrylate Rubber
ASTM代號: DF, DH, EH

CS 氯磺化聚乙烯膠 (CSM)
Hypalon. Polyethylene
ASTM代號:CE

PU 聚氨酯膠 (PU)
Polyurethane Rubber
ASTM代號: BG

NR 天然橡膠 (NR)
Natutal Rubber
ASTM代號: AA

IR 異戊橡膠 (IR)
Polyisoprene Rubber
ASTM代號: AA

SB 丁苯膠 (SBR)
Styrene butadiene Rubber
ASTM代號: AA

BR 順丁膠 (BR)
Polybutadiene Rubber
ASTM代號: AA, BA

IIR 丁基橡膠 (IIR)
Butyl Rubber
ASTM代號: BA

EP 乙丙膠 (EPDM)
Ethylene propylene Rubber
ASTM代號:
AA, BA, CA, DA

CR 氯丁膠 (CR)
Polychloroprene Rubber
ASTM代號:BS, BE

NB 丁腈膠 (NBR)
Nitrile Rubber
ASTM代號:BF, BG, BK, CH

HOW TO SELECT Rubber Material

When selecting elastomeric seals for specific applications, there are a number of important selection criteria including the anticipated service conditions, the design and inspection requirements for the particular application and material specification and traceability.

I 、The service conditions to be considered include:
1. Fluid to be sealed, including any contaminants or additives.
2. Temperature range including minimum and maximum operating conditions, as well as thermal cycling and potential excursions.
3. Pressure range - including minimum and maximum operating range with an error range and compression/ decompression rate if the pressure is high.
4. Vacuum application - including where the vacuum is applied and whether it is cyclic.
5. Motion - either static or dynamic. If it is dynamic, describe the motion.

II 、The design requirements of the particular sealing application are also critical including:
1. Component geometry/description, like O-ring, gasket, diaphragm, etc.
2. Chemical media's affect on the seal
3. Desired service life. If it is a replacement for a failed seal, which material was used before and why did it fail.
4. Assembly considerations including lubricants, installed stretch, etc.
5. Critical dimensions and tolerances, including groove dimensions and machining tolerances.

III 、It is important to consider the inspection requirements including:
1. Defining inspection criteria
2. Determining the need for lot sampling
3. Setting acceptable quality levels (AQLs)
4. Indicating the critical sealing surface.

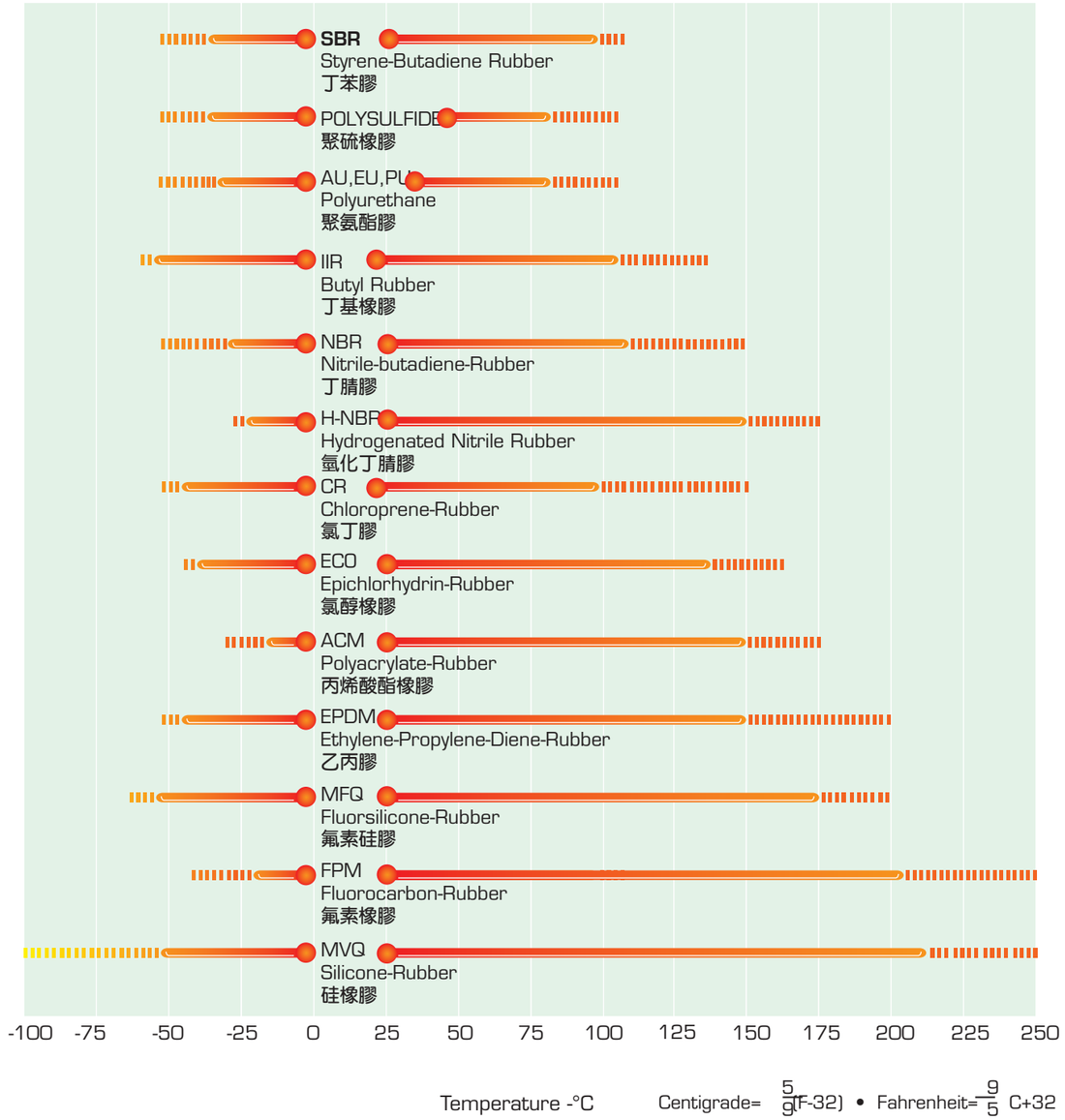
IV 、Material specification and traceability are also critical for proper seal selection.
1. Define material specifications by the American Society for Testing and Materials (ASTM). Society of Automotive Engineers (SAE),military specification or other recognized standards.
2. Discuss with your seal supplier the procedure for specifying and certifying sealing materials.
3. Ask your supplier if compound changes may without a customer's knowledge and how to protect yourself from it.
Are hardness buttons, tensile bars or other test specimens required for incoming material verification.

IV 、Cost versus Value
When selecting materials for your particular sealing application,the guiding principle should be "value-in-use." When evaluating seal performance, seal life and maintenance costs must be included. A seal made from EPM may be appropriate for many general applications where heat and steam are encountered, but inappropriate at higher temperatures when contaminated steam and frequent maintenance are required. The relatively high price of a fluoroelastomer or perfluoroelastomer will be recouped many times over by a seal's long service life. Specifying the proper high performance seal can also prevent costly unscheduled downtime and dangerous leakage.

橡膠材質耐溫表
TEMPERATURE RESISTANCE
OF RUBBER MATERIALS

適用溫度 Working Temperature period.

特殊配方可達到之溫度區間
Only to be achieved under particular conditions with special compounds.



橡膠材質比較表
RUBBER MATERIALS PROPERTIES

◎ 超 Excellent　● 優 Good　■ 中 Suitable　△ 差 Limited　▼ 劣 Poor

	NR	IR	SBR	BR	IIR	EPDM	CR	NBR	PU	CSM	ACM	ECO	VAE	SI	FPM
拉　力/Tensile Strength	◎	●	●	△	△	△	●	●	◎	●	▼	△	●	▼	●
伸　長/Elongation	◎	◎	●	△	●	●	●	●	◎	●	▼	▼	▼	◎	▼
彈　性/Rebound Resistance	◎	◎	△	◎	▼	●	◎	●	◎	△	△	△	△	△	△
撕斷力/Tear Resistance	◎	●	△	△	△	△	●	●	◎	△	▼	△	△	▼	△
耐　磨/Abrasion-Resistance	◎	◎	◎	◎	◎	●	●	◎	◎	●	△	△	●	▼	△
撞擊力/Impact Strength Resistance	◎	◎	◎	●	●	●	◎	●	◎	●	▼	●	△	▼	△
氣密性/Gas Impermeability Resistance	△	△	△	△	◎	△	●	●	●	●	△	◎	●	▼	●

	NR	IR	SBR	BR	IIR	EPDM	CR	NBR	PU	CSM	ACM	ECO	VAE	SI	FPM
耐臭氧/Ozone Resistance	▼	▼	▼	▼	●	◎	●	▼	●	◎	●	◎	◎	◎	◎
耐　候/Weathering Resistance	△	△	△	△	◎	◎	●	△	●	●	●	●	◎	◎	◎
耐日光/Flame Resistance	▼	▼	△	△	◎	◎	●	▼	●	◎	●	●	◎	◎	◎
耐　熱/Heat Resistance	▼	▼	△	△	●	◎	●	△	△	●	●	●	●	◎	◎
低溫性/Low Temperature Resistance	●	●	△	●	△	●	△	△	●	△	▼	●	●	◎	●

	NR	IR	SBR	BR	IIR	EPDM	CR	NBR	PU	CSM	ACM	ECO	VAE	SI	FPM
油與汽油/Oil and Fuel Resistance	▼	▼	▼	▼	▼	▼	■	●	●	■	●	●	△	△	◎
動植物油/ Animal and Vegetable Oil Resistance	△	△	△	△	●	●	●	◎	●	●	◎	◎	△	■	◎
酒　精/Alcohol Resistance	●	●	●	●	●	■	◎	●	■	◎	●	●	●	●	●
鹼　液/Alkaline Resistance	△	△	△	△	◎	●	◎	●	▼	◎	▼	■	●	▼	■
酸　液/Acid Resistance	■	■	■	■	●	●	●	●	▼	●	△	△	△	△	●
溶劑油/Aliphatic-solvent Resistance															
- Aliphatic	▼	▼	▼	▼	▼	▼	●	◎	●	●	◎	●	△	▼	◎
- Aromatic	▼	▼	▼	▼	▼	▼	△	■	▼	△	△	●	▼	▼	◎
氧化溶劑/ Oxygenated-Solvent Resistance	●	●	●	●	◎	◎	▼	▼	▼	△	▼	▼	△	△	▼
耐水性/Water Resistance	◎	◎	●	◎	◎	◎	●	●	△	●	▼	●	●	●	●

長泓集團歷史沿革

*1995*年 長泓膠業股份有限公司創立

*2000*年 遷移至彰濱工業區成立長泓膠業總公司及新廠

*2001*年 通過***ISO-9001***品質認証

*2003*年 取得橡膠實驗室認証***(CNLA)***
中國松江廠成立,以供應各產業穩定且高品質橡膠混鍊膠產品

*2004*年 導入***ERP***電腦系統
泓衆貿易有限公司成立,負責道康寧硅膠產品銷售

*2006*年 台灣擴增新生產線,滿足客戶對訂單的需求,並取得***TAF***橡膠實驗室認証

*2009*年 遷移至上海松江區，成立佰力***(***上海***)***醫藥材料貿易有限公司及新廠

*2012*年 台灣擴增新生產線，獨立***FKM***及矽膠生產線

*2015*年 中國松江廠擴增廠房及生產線，並導入***ERP***及條碼控制系統
提供給汽車產業及航太對於橡膠產品的要求

CHR GROUP HISTORY

1995 Chang Horing Rubber Co; Ltd. established

2000 CHR moved to new factory and started to work

2001 CHR received ISO-9001 certification

2003 CHR Lab was certified by TAF (CNLA)
Building China Plant, started to produce in December,01

2004 CHR Processes computerized by ERP system.
Shanghai Prosell Trading Company established

2009 Moved to new factory and six production in Song-Jiang district Shanghai, including a state-of-art testing laboratory

2012 China Bioicone (ShangHai) Medical Materials Trading Company established.
CHR Taiwan expanding new production line, set up an independent FKM and Silicone production line and started to produce.

2015 Expanding factory area and more production line in Song-Jiang district Shanghai, start produce in July,01

CHR Headquarter
Lu-Gang, Taiwan

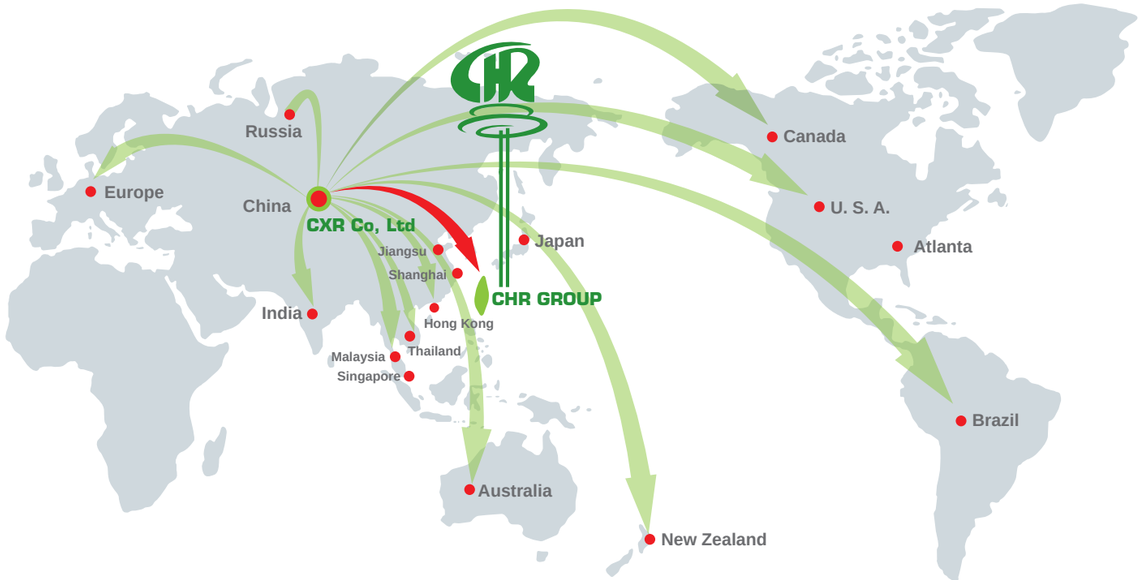
CXR Factory
Shanghai

CHR Factory
Pingtung, Taiwan

CHR Factory
Bali, Taiwan

CHR GROUP Markting & Service Network

4 Factories Taiwan & China **12** Service Offices in China



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