

# RALLI RANGE®

## 偉利系列

### Civil Work

MTR Siu Ho Wan Depot 港鐵小環灣車廠

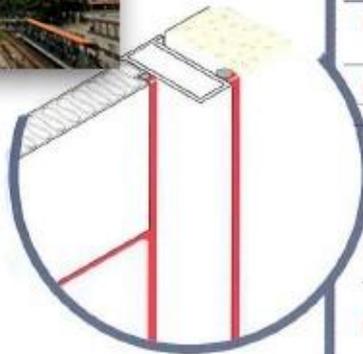


### Commercial Building

China Resource Building 香港華翠大廈



**Public Housing**  
Tin Shui Wai 天水圍



# Rallithane

# 850

A low modulus, one-part, elastomeric polyurethane sealant

### Features:

- Permanently flexible
- One pack easy to apply
- Conforms to: BS 4254 perf. Requirements, ISO 11600-F-25LM
- VOC Content - 61 g/L
- Low odour
- Excellent resistance to weathering
- Can be overpainted
- Excellent adhesion on most type of substrates

### Typical use:

- Perimeter seals of doors, windows, etc.
- Cladding seals within lightweight modular systems
- Movement joints in concrete structures
- Joints in floors

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RALLI Range of products are designed, manufactured and supplied by MASTER PROOFER COMPANY LTD  
Head Office: 139A Hung UK Tsuen, Ping Shan, Yuen Long, N.T., Hong Kong  
Tel : (852)2609 2300 Fax: (852)2609 2390 E-mail: master@masterproofer.com

**MASTER PROOFER**  
香港萬寶建築化工  
Integrity & Accuracy  
誠信 · 精準

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Form-MKT/MP/340.01



# 850

## A low modulus, one part elastomeric polyurethane sealant

### METHOD OF USE

#### Preparation:

All surfaces should be sound, clean, dry free of dust, oil, grease or other contamination. Loose matter should be removed by abrasion if necessary, finally removing the dust with a dry brush.

Oil and grease are removed by the use of a cloth moistened with **approved solvent**. The cleaning cloth should be replaced regularly to avoid redistribution of contaminants over the surfaces. Masking tape may be used to ensure a neat edge to the seal and protect substrates from which the removal of sealants is difficult. It should be applied before priming.

A suitable back-up material (approximately 30% oversize) should be placed into the joint to the required depth – see **Joint Design**. Closed cell polyethylene foam is normally used as it is a bond - breaker, ensuring that the sealant bonds only to the sides of the joint. If a rectangular section is installed, care must be taken to ensure that it does not twist, thus changing the joint configuration, to the detriment of the sealant's performance. If the joint has insufficient depth to accommodate a closed cell polyethylene foam, a self-adhesive polyethylene tape may be substituted.

#### Priming:

##### i) Concrete, timber and porous surface:

A coat of **Rallirange 160** should be applied to the dry substrate and allowed to dry for between 45 minutes and 2 hours.

##### ii) Non-porous substrates:

A coat of **Rallirange 140** should be applied to the dry surfaces and allowed to dry for between 45 minutes and 2 hours.

#### Application:

Before starting application, ensure that any primer to cleaner has dried completely. If primer is left beyond 4 hours it must be reapplied. If left for 12 hours it must be removed and reapplied.

Using a hand gun, extrude the sealant into the base of the joint and ensure that complete contact is made with the substrates. Care should be taken to avoid trapping air within the sealant,

Select a tool to suit the width of the joint and wet it with clean water containing a little detergent. Working upwards in the case of vertical joints, lightly tool the sealant into the joint. This will improve adhesion, reduce air content and enhance the appearance of the finished joint. Remove masking tape, if used, immediately after tooling.

#### Cleaning:

Tools can be cleaned using approved solvent.

#### Coverage:

The following formula gives the quantity required:

#### Foil sachets:

$$\frac{\text{Cross section of seal (mm}^2\text{) x Length (m)}}{600} = \text{No. of Sachets}$$

Rallithane 850 of RALLIRANG Specialty Sealant System, is manufactured by:  
**MASTER PROOFER COMPANY LIMITED**

Factory Address:  
 1355-21 Kangnam Bldg 9/F., Seocho-Dong,  
 Seocho-Gu, Seoul, Korea

### JOINT DESIGN:

Laboratory tests show that in butt joints an optimum performance is achieved when Width : Depth = 2: 1 For joints moving in shear Depth>Width.

Wide joints may require more applications, allowing the sealant to cure slightly between applications.

If the joint is not deep enough to accommodate the foam backing strip, a self-adhesive polyethylene tape should be used to ensure that the sealant bonds only to the sides of the joint.

When used as a triangular fillet, there should be at least 6mm cover on each substrate and the fillet should be a regular triangle in cross section.

**Rallithane 850** can be over-painted, but in common with other sealants, if significant movement occurs, the paint film will craze to the long-term detriment of the sealant.

**Note:** When the Width: Depth ratio is altered, the Movement Accommodation Factor is changed and allowance must be made in the calculation of the joint width.

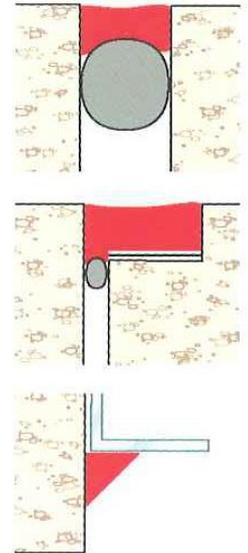
### TECHNICAL DATA:

Base Polymer	Thixotropic polyurethane
Storage Conditions	Storage dry between 5°C & 30°C
Shelf Life	12 months
Service Life	> 10 Years
Hardness (Shore "A" scale)	22±2
Application Temperature	5°C to 40°C
Service Temperature	-40°C to 90°
Cure Time (@ 23°C & 50% RH)	2mm/24 hours
Average life expected	In excess of 20 years
Resistance to Water	Excellent (but not against highly chlorinated water, e.g. swimming pool)
Resistance to chemicals	Good, weak acids and alkalis, alcohols and aliphatic hydrocarbons
Flash Point	> 80°C
U.V. Resistance	Excellent
Standards Compliance:	B.S 4252 (performance requirements)
Colours	White, Grey, Black and sandstone (other colours available on request)
Movement Accommodation Factor	30% (butt Joints) 50% (lap Joints)
Tack Free Time(@23°C, 50% RH)	60-90 mins
Tensile Strength (MPa)	0.8
Modulus at 100% Extension(M Pa)	0.4
Elongation at Break (%)	>500
VOC Content	61 g/L (USEPA Method 24 & SCAQMD Method 303-94)

### HEALTH AND SEAFETY:

**Rallithane 850** can be considered to be free from significant dangers in normal use provided that the usual precaution in handling chemicals are taken. Refer to material safety data sheet for further information.

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## Rallithane 偉利 850

### A low modulus 1 part elastomeric polyurethane sealant 單成份低彈性模量聚胺脂密封膠

#### 產品簡介

偉利 850 為一種具備優良黏附力及彈性模量的密封膠，持久力特長，極低氣味，用法簡單，無色素沾污。產品符合英國 BS4254 膠規格及 ISO 11600 的膠體表現。

#### 技術資料

基礎聚合物成份(Base Polymer)	趨流性聚胺脂(Thixotropic polyurethane)
儲存環境(Storage Conditions)	須存於乾爽及保持在攝氏 5° 至 30° 之間
存貨有效期(Shelf Life)	12 個月
硬度(Hardness, Shore 'A' Scale)	22 ± 2
有效施工環境溫度(Application Temperature)	攝氏 5° 至 40°
凝固膠體溫度承受限度(Service Temperature)	攝氏 -40° 至 90°
攝氏 23° 及相對濕度 50% 下凝固速度(Cure Time)	2mm/24 小時
估計凝固膠體平均壽命(Average Life Expected)	超過 10 年
抗水侵蝕能力(Resistance to Water)	極高(但不適宜於高氯氣成份水質如泳池等)
抗化學物侵蝕能力(Resistance to Chemicals)	抗弱性酸、鹼、酒精及脂肪族碳氫化合物
燃點(Flash Point)	攝氏 80° 或以上
抗紫外線老化能力(U.V. Resistance)	極高
符合規格(Standards Compliance)	B.S.4254
顏色選擇(Colours)	灰、啡、黑、白或可訂做顏色
變位承受百分率(Movement Accommodation Factor)	30% 平接                      50% 搭接
外層初步凝固時間(Tack Free Time)	60 - 90 分鐘
拉展極限 (%)	500
彈性模量於 100% 伸延 (mPa)	0.8, 0.4
揮發性有機化合物 (VOC Content)	61g/L (USEPA Method 24 & SCAQMD Method 303-94)

#### 一般應用範圍

專門應用於石屎、雲石、磚牆伸縮縫、鋁窗身外框、幕牆鋁板等。

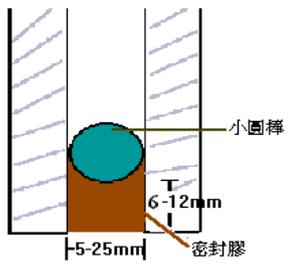
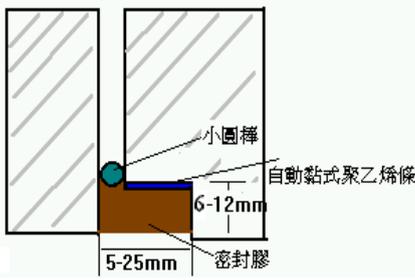
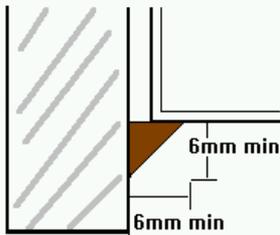
#### 事前準備及應用步驟

- 先將附著施工面上塵埃，油脂及疏鬆物質清除。根據物質類別，如有需要塗上適當底油並讓其乾固。
- 將墊底小圓棒(比原縫口寬度大約 30%)放於預算深度以支撐未凝固密封膠及作中介物以保持密封膠只黏附兩個接觸面。  
如果縫口深度不足夠擺放墊底小圓棒，可以用自動黏式聚乙烯條代替。如應用接觸面超過兩個，應用自動黏式聚乙烯條將其餘接觸面和密封膠隔離。(有關縫口設計及底油選擇請參閱背頁)
- 如須預防縫口周邊黏上多餘密封膠，可先用自動黏式聚乙烯條將周邊貼妥並於施工後和密封膠未凝固前將貼條挑起。
- 施工前先確定底油已完全乾固，施工唧膠鎗為適用於 600ml 豬腸裝類型。
- 將膠鎗斜切出一個適合縫口的實際大小，順貼施工面上將密封膠慢慢逼出，留意密封膠是否已將兩面緊貼，施工於垂直縫口時可將鎗向下，從上至下施工。這可減低氣泡形成機會，令效果更理想。
- 在密封膠未凝固前用工具將表面燙平。

#### 工具清洗

可用二甲苯或天拿水清洗。

**縫口設計**

<p><b>縫口設計圖 A</b></p> <p>從實驗中顯視當‘對接型’縫口所卸上膠體的寬度和深度成 2:1 所發揮效果是最理想的。但如果縫口以撕拉式移動則需要將深度定大於寬度。</p> <p>較闊的縫口或需要分兩次施工來完成封口。第二次施工時需讓第一次的膠稍為凝固才開始。</p> 	<p><b>縫口設計圖 B</b></p> <p>如果縫口深度不足容納小圓棒，可改用自動黏貼式聚乙烯條以保證密封膠只與兩個平行接觸面黏合</p> 
<p><b>縫口設計圖 C</b></p> <p>當施行三角形色封口則應是一個正三角形而貼邊位起碼長 6mm。</p> 	<p>偉利 850 可塗上漆油但如其它密封膠一樣，若果出現較大幅的伸縮移位，漆油層會破裂亦同時影響密封膠的耐用性能。當寬度與深度比例改變，變位承受百份率亦會降底。在設計縫口須考慮 這類變數。</p>

**底油選擇**

- i) 石屎、木質及多微孔面需塗上偉利 160 底油並需 45 分鐘至 2 小時乾固。
- ii) 非疏鬆及光滑面可用偉利 140 底油並需 45 分鐘至 2 小時乾固。

**衛生與安全**

在正常使用及遵守一般處理化學品的情況下，偉利 850 並不具備危險特性。進一步資料可參考物質指南。

**用量預算**

以下公式可估計所需用量：

$$\frac{\text{封口橫切面積}(\text{mm}^2) \times \text{縫口長度}(\text{m})}{600} = \text{600ml 豬腸裝數量}$$

**包裝形式**

偉利 850 : 600ml 豬腸裝