



*Dura-Warranty*

Aires 



# SAFTY SIGNS

## ACCORDING TO EN ISO 7010

Offshore | Onshore | Hospital | Traffic



[www.aires.co.th](http://www.aires.co.th)



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



# QUALITY POLICY

Aires shall do our best to source and provide high quality and trusted materials, products and services in Engineering, Industrial and Technology field to fulfill Customer Needs and Expectations

## We are continuously

- Improving product and services quality
- Creating sustainable organization growth,
- Building up knowledge and skill in all levels staff and
- Creating team cooperation for continuous improvement and meet highest Customer Satisfaction.



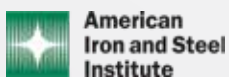
ISO 9001 : 2015  
REGISTRATION NO.  
**IC-QM-2302139**

## ISO 9001 : 2015

ISO 9001 is a quality management system according to international standards. The key idea of ISO 9001 is to establish a management system for quality assurance which is a system that ensures various processes are controlled and traceable. Through a system that specifies procedures and work methods to ensure that personnel in the organization know their duties, responsibilities and procedures in work. There must be training to provide knowledges and skills in performing the job. Data is recorded Including checking whether work operations are as specified in the system or not. Errors are corrected and there are guidelines to prevent repetitive errors.

The ISO 9001:2015 standard adds requirements for understanding the organization and its context. Understanding stakeholder needs and expectations for action on risks, opportunities and other requirements. This is one basis that will help the organization continue moving towards sustainable development.

In addition, OPI' s products have been supplied according to below national standard as well.



# QUALITY POLICY



## CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Quality Management System of

**Aires Company Limited**



14 Soi Krungthep Kritha 37 Yaek 1, Khwaeng Thap Chang, Khet Saphan Sung, Bangkok, Thailand 10250

Has been successfully assessed as per the requirements of

**ISO 9001:2015**

For the scope of

**Sourcing and Supply Goods and Services for Equipments and Tools (Civil Engineering, Mechanical Engineering, Electrical Engineering, Industrial and Factory products and Safety Devices).**

Initial Certification Date	: February 25, 2023
Certificate Issue Date	: February 12, 2024 Rev.1
Surveillance Validity Date	: February 24, 2025
Recertification Date	: February 24, 2026

Registration Number: IC-QM-2302139



Issued on behalf of InterCert  
Head - Certifications



The validity of this certificate can be verified at [www.intercert.com](http://www.intercert.com) or through email at [info@intercert.com](mailto:info@intercert.com). This certificate is the property of INTERCERT INC, 2001 Timberloch Place - Suite 500, The Woodlands, Texas 77380, United States and must be returned on request.





# SAFETY & TRAFFIC SIGNAGE

## SAFETY SIGNAGE

With various type to apply.  
All signs are according to EN ISO 7010  
& TIS 635 Safety Signs standard

## BRIGHT & LUME

Anti-Slip Tape  
Luminative Traffic Equipments





High-quality safety equipments and safety signages for both indoor and outdoor use with minimum 5 years warranty.

**We always offer the latest safety equipments to guarantee your compliance to regulation EN ISO 7010 and TIS 635 safety signs** are available in different materials for maximum durability in different industrial contexts.

**3M** Science.  
Applied to Life.™

## Certificate of 3M™ MCS™ Warranty

*Aires Co., LTD.*

*14 Soi Krungthep Kreetha,, Saphan Sung, Bangkok, 10240, Thailand*

*Latex 570 - HP 871 Latex Ink, a 3M™ MCS™ Warranty Component*

*Sep 03, 2024 to Sep 03, 2025*

3M certifies that for the stated period and subject to annual renewal, this Graphics Manufacturer is qualified to offer the 3M™ MCS™ Warranty for graphics made with all 3M-specified products, when manufactured with the materials and equipment shown above, applied and used as recommended in applicable 3M Product and Instruction Bulletins.

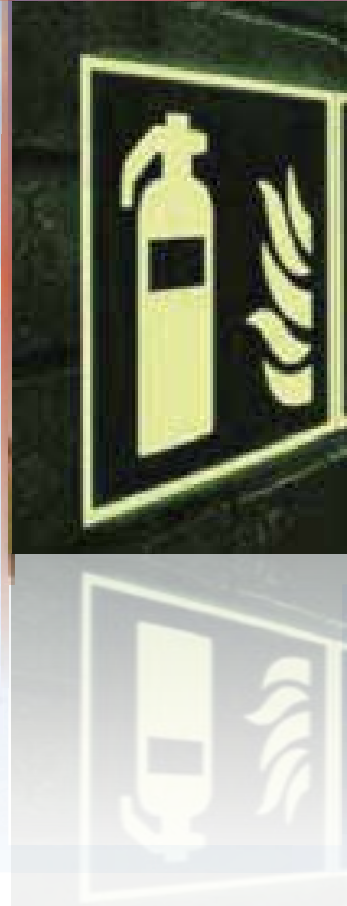


3M™ MCS™ Warranty

*Worakul Shim*

Worakul Shim, Global Vice President

Certificate Serial Number: TH-21410-A-HP024-A





**EN ISO 7010** was first introduced in 2003, updated in 2012 and is now a European norm which provides a standardised, easy-to-comprehend safety message wherever you are, whatever language is used.

### Why EN ISO 7010 and TIS 635 ?

The purpose of the standard is to introduce a globally recognised range of safety pictograms. Although many will already be familiar, some are new change, it is always best practice to keep your safety signage aligned with introductions. the new, compliant symbols to avoid confusion. While any new compliance regulations are unlikely to demand immediate

### What does ONE offer

We always offer the latest safety signage to guarantee your compliance to regulation to regulation and TIS 635 safety signs are available in different materials for maximum durability in different industrial contexts.

### Where does EN ISO 7010 and TIS 635 apply?

The standard covers safety signs in workplaces and other locations where people need to be informed about safety matters from emergency exits to hazardous areas.



You have the option to request a personalized safety sign design featuring a pictogram selected from the EN ISO 7010 and TIS 635 range accompanied by text tailored to your preferences.





# MATERIAL OFFERS



## FLAT PLATE SIGNAGE



- Reflective sign / adherable to any rigid plates
- Best solution for outdoor, offshore, marine, chemical operation use
- Temperature resistance from -40°C up to +120°C
- Thickness: any
- Adhesive / non-adhesive type



## BI-DIRECTIONAL AND FLAG DIRECTIONAL SIGNAGE



V-shaped (V)

- Bi-directional signs provide excellent orientation in corridors, paths, passages or halls. Because of their design, they can be seen from a much wider angle.
- Offers V-shape.
- Mounted by using double sided adhesive tape or screws.
- Material : Polyvinylchloride / Acrylic

## FLOOR SIGNS



Designed to mark an area where personal safety equipment must be used. Floormarking Signs are made out of polyvinyl chloride (PVC) and a transparent, matte, anti-slip laminate to prevent falls while protecting the graphics underneath. The tough adhesive can be applied to most clean, dry, smooth floors.

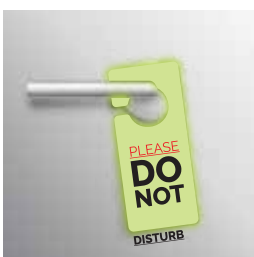
- Material : Anti-Skid Laminated PVC. See page 8 for material description.
- Diameter of the pictogram: 500.00 mm or required.



## Mini Label

Compact stickers mini label for easy application complete with high-quality materials for long-lasting use and offering a variety of features to suit your needs.

Shape	Size
	10 mm.
	10 mm.



## REFLECTIVE HANGING DOOR TAG

A label on a door knob or door opener in your building that identifies the functioning of a room or the identity of a space with the special ability to glow, reflects light at night. Easy to follow in the dark and nice to the eye. With our item in the style you like best.

# MATERIAL OFFERS

Basic Information about Safety signage

4

## LAMINATING FILM

- OPTION :
- 3m 4156
  - 3m 3619
  - 3m 8519

3

## PRINTED LAYER

OPTION :

- You can order a custom layout safety sign showing a pictogram from the EN ISO 7010 and TIS 635 range with the text of your choice.
- As well as the EN ISO 7010 and TIS 635 signs, we will continue offering safety signage with text and pictograms in accordance with The Health & Safety (Safety Signs & Symbols) Regulations.

2

## LUMINOUS / REFLECTIVE FILM

OPTION :

### Reflective Sticker Grade

Reflective Film

Luminous Film

Reflective + Luminous Film

1

## SUBSTRATE

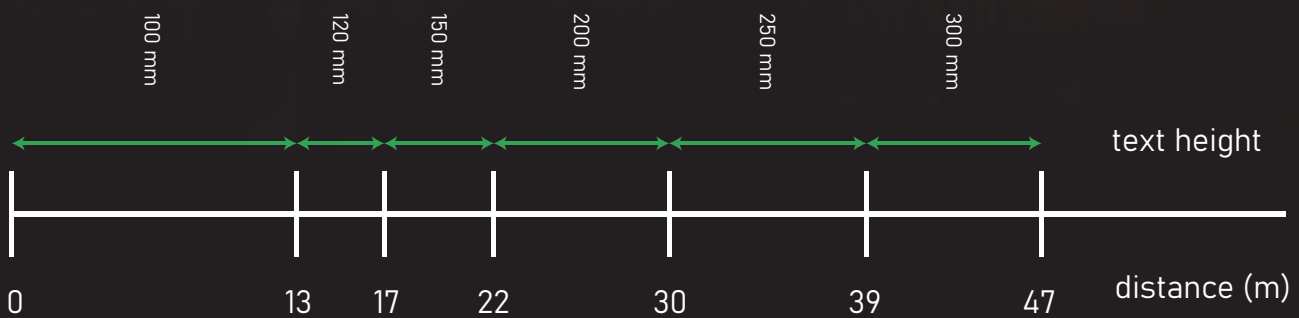
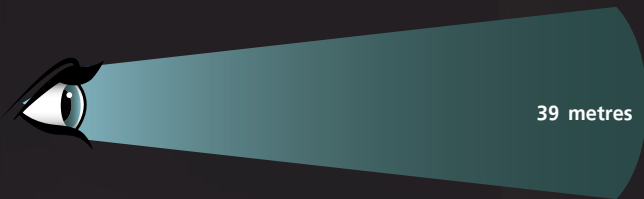
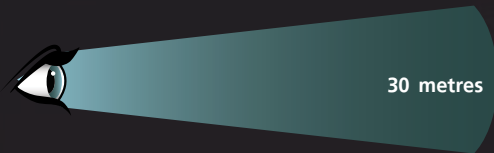
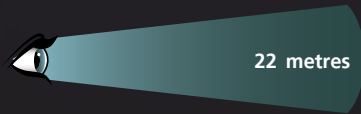
OPTION :

Board Material	Board Thickness
Acrylic / ABS	1 to 10 mm.
Normal / Marine Grade Aluminum Sheet	1 to 6 mm.
Stainless Sheet (SS304 / SS316L)	1 to 3 mm.



# CHOOSING A SIZE

(ONLY SINGLE LINE ALPHABET)





# BRIGHT & LUME

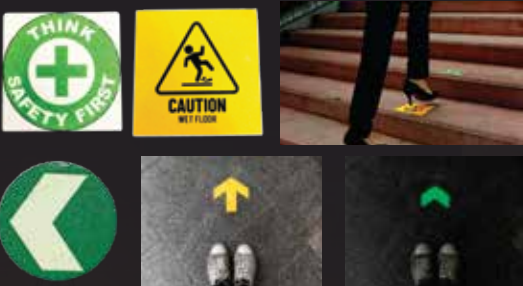
## FLOOR TAPE

- Option
- Normal Tape
  - Luminous
  - Anti-Slip + Luminous



## ANTI-SLIP GRAPHIC FLOOR

- Option
- Normal
  - luminous
  - Anti-Slip luminous



Create a customized sign for your space using our reflective and standard marker floor material, boasting excellent anti-slip features and easy adhesive application.

## ANTI-SLIP FLOOR TAPE



Tape adhered to slippery floors, taircases, high-traffic walkways, areas with oil, or paths used by carts.

## LUMINOUS TAPE

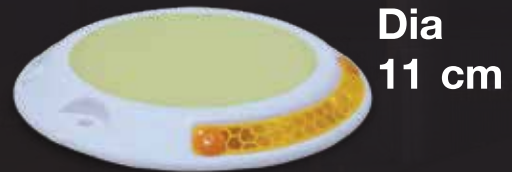
Glow tape are convenient glow-in-the-dark products. Usage method is very simple, just peeling off the back liner and then adhere to surface immediately.

There are 3 glow levels :

- Standard glow (DIN 67510 class C),
- High glow (DIN 67510 class D),
- and Super glow (DIN67510 class E).



## CURB-STUD



The special features are "slip-resistant" and "waterproof" so it can be used outside buildings weighs break point 1.5 tons. It is bright in the dark green. It can be lighted in dark without electricity.

## NAME PLATE / TAG

- Multi-Layered Phenolic Plastic (Traffolyte)
- Chemical Etching Stainless Steel (SS304 & SS3016L)
- Laser Engraving/Cutting Stainless Steel (SS304 & SS316L)



## How to Order

- Your order can be reference corresponding with the desired layout, size and material.
- Select a sign type (emergency and first aid, fire fighting equipments, mandatory, prohibition, hazard warning).
- Select any symbols from full brochure (Page G11 - G23). Upon ordering clearly state pictogram number. Custom symbols can be used, if supplied in the appropriate file format (eps).
- Add your text.

# COLOR DEFINITIONS

Type	Color Sample	Sample	Manual	Page
<b>EN ISO 7010</b>				
01 Mandatory Signs			Mandatory Signs are to advise and inform visitors and staff in what they must do to insure a safer working environment for themselves and others around. Colour: Blue background, White symbol with White text. Symbol: Circle.	11 - 12
02 Hazard Warning Signs			Hazard Signs to warn visitors and staff of potential dangers around the workplaces. Colour: Yellow background, Black symbol with Black text. Symbol: Triangle.	13 - 14
03 Prohibition Signs			Prohibition Signs are to inform and advise staff and visitors of actions which are prohibited. Colour: White background, Red band, Black symbol with Black text. Symbol: Circle with band.	15 - 16
04 Emergency Exit and First Aid Signs (Photoluminescent)			Offers a comprehensive range of Emergency Escape and First Aid signs which help you comply with current legislation. Colour: Green background, White symbol with White text. Symbol: Rectangle	17
05 Fire Fighting Equipments Signs			Offers a range of signs to clearly mark the location of fire extinguishers and other fire fighting equipments as well as fire alarm points. Colour: Red background, White symbol with White text. Symbol: Rectangle	18
<b>General Sign</b>				
06 Zintec Signs			Reflective Class 1 Zintec Signs Made using class 1 reflective vinyl applied to a zintec plate for permanent or temporary use.	19
07 Traffic Signs			Made from class1 reflective film mounted on 2-3 mm aluminium / steel plate, idea for controlling traffic on industrial estates. Sign only suitable for walls, pillars and sign Channel is suitable for post mounted signs.	20

# COLOR DEFINITIONS

Type	Color Sample	Sample	Manual	Page
<b>General Sign</b>				
08 Site Entrance Sign			If you require your logo please send us your artwork in a high quality JPEG. If you have any further questions about your logo please be appreciate to contact us	21
09 Multi-Purpose Signs			Ideal where dual information is required on the same signage.	21
10 Wrap Recycling Labels & Signs			To Encourage business and local authorities to reduce waste and recycle more, the Government have introduced a new range of recycling signs.	22
11 CCTV SIGNS			To comply with the "Data Protection" all companies that use CCTV must identify themselves and the purpose for which the data will be used for.	23

# CUSTOM SAFETY SIGNS LAYOUT

choose from our size guides or tailor made.

## LAYOUT 1

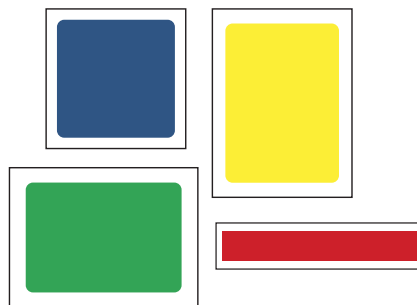
Single

Ratio 3 : 2

350 x 350  
300 x 450  
200 x 225

Ratio 1 : 2

150 x 300



## LAYOUT 2

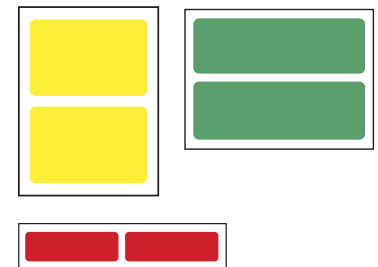
2 blocks

Ratio 3 : 2

300 x 450  
200 x 225  
150 x 300

Ratio 1 : 2

150 x 300



## LAYOUT 3

2 blocks

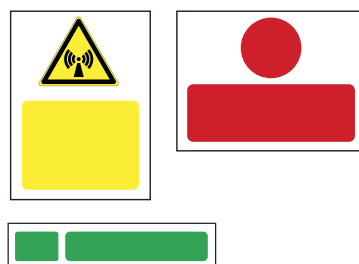
Sign and  
Typography block

Ratio 3 : 2

300 x 450  
200 x 225

Ratio 1 : 2

150 x 300



## LAYOUT 4

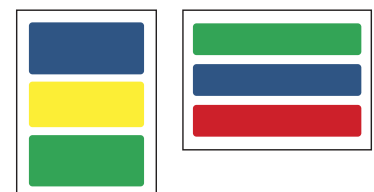
Multi blocks

Ratio 3 : 2

300 x 450  
200 x 225



Ratio 1 : 2

150 x 300




























# MANDATORY SIGNS (EN ISO 7010)

<b>M001 :</b> General mandatory action sign 		<b>M002 :</b> Refer to instruction manual / booklet 		<b>M003 :</b> Wear ear protection 		<b>M004 :</b> Wear eye protection 	
TH	ป้ายบังคับทั่วไป	TH	ดูคู่มือการใช้งาน	TH	สวมเครื่องป้องกันหู	TH	สวมชุดป้องกันดวงตา
JP	一般的な必須記号	JP	取扱説明書/小冊子参照	JP	耳の保護具を着用する	JP	目の保護具を着用する
CN	一般强制性标志	CN	请参阅说明手册/小册子	CN	佩戴耳罩	CN	戴眼罩
<b>M005 :</b> Connect an earth terminal to the ground 		<b>M006 :</b> Disconnect mains plug from electrical outlet 		<b>M007 :</b> Opaque eye protection must be worn 		<b>M008 :</b> Wear safety footwear 	
TH	ต่อขั้วดินกับกราวด์	TH	ถอดปลั๊กไฟออกจากเต้าเสียบทุกครั้ง	TH	ต้องสวมแว่นตาป้องกันแสง	TH	สวมรองเท้าเซฟตี้
JP	接地端子を地面に接続する	JP	電源プラグをコンセントから抜く	JP	不透明な目の保護具を着用しなければならない	JP	安全靴を着用する
CN	将接地端子连接到地面	CN	将电源插头从电源插座上拔下	CN	必须佩戴不透明的护目镜	CN	穿安全鞋
<b>M009 :</b> Wear protective gloves 		<b>M010 :</b> Wear protective clothing 		<b>M011 :</b> Wash your hands 		<b>M012 :</b> Use handrail 	
TH	สวมถุงมือป้องกัน	TH	สวมชุดป้องกัน	TH	ล้างมือ	TH	ใช้ราวบันได
JP	保護手袋を着用する	JP	保護服を着用する	JP	を洗いなさい	JP	手すりを使用する
CN	戴防护手套	CN	穿防护服	CN	洗你的手	CN	使用扶手
<b>M013 :</b> Wear face shield 		<b>M014 :</b> Wear head protection 		<b>M015 :</b> Wear high visibility clothing 		<b>M016 :</b> Wear a mask 	
TH	สวมหน้ากากป้องกันใบหน้า	TH	สวมเครื่องป้องกันศีรษะ	TH	สวมเสื้อผ้าสะท้อนแสง	TH	สวมหน้ากาก
JP	一般的な必須記号	JP	摩擦保護	JP	視認性の高い衣服を着用する	JP	マスクを着用する
CN	一般强制性标志	CN	戴头部保护装置	CN	穿高能见度的服装	CN	戴上面具
<b>M017 :</b> Wear respiratory protection 		<b>M018 :</b> Wear safety harness 		<b>M019 :</b> Wear welding mask 		<b>M020 :</b> Wear safety belts 	
TH	สวมเครื่องป้องกันทางเดินหายใจ	TH	สวมสายโรยตัวรัดนิรภัย	TH	สวมหน้ากากเชื่อม	TH	สวมเข็มขัดนิรภัย
JP	呼吸保護具を着用する	JP	安全ハーネスを着用する	JP	溶接マスクを着用する	JP	安全ベルトを着用する
CN	戴呼吸保护装置	CN	佩戴安全带	CN	戴上焊接面罩	CN	请佩戴安全带
<b>M021 :</b> Disconnect before carrying out maintenance or repair 		<b>M022 :</b> Use barrier cream 		<b>M023 :</b> Use footbridge 		<b>M024 :</b> Use this walkway 	
TH	ตัดการเชื่อมต่อก่อนดำเนินการบำรุงรักษาหรือซ่อมแซม	TH	ใช้ครีมป้องกัน	TH	ใช้สะพาน	TH	ใช้ทางเดินนี้
JP	保守または修理を行う前に切断する	JP	バリアクリームを使用する	JP	歩道橋を使用する	JP	この歩道を使う
CN	在进行维护或修理之前断开连接	CN	使用防护霜	CN	使用行人天桥	CN	使用这条走道













# MANDATORY SIGNS (EN ISO 7010)

<p><b>M025 :</b> Protect infants eyes with opaque eye protection</p> 	<p><b>M026 :</b> Use protective apron</p> 	<p><b>M027 :</b> Check guard</p> 	<p><b>M028 :</b> Keep locked</p> 
<p><b>TH</b>   สวมแว่นตาป้องกันแสงสำหรับทารก</p>	<p><b>TH</b>   สวมผ้ากันเปื้อน</p>	<p><b>TH</b>   ตรวจสอบเครื่องป้องกัน</p>	<p><b>TH</b>   ล็อคตลอดเวลา</p>
<p><b>JP</b>   幼児は不透明な目の保護具で保護されなければならない</p>	<p><b>JP</b>   保護エプロンを使用する</p>	<p><b>JP</b>   チェックガード</p>	<p><b>JP</b>   ロックしたままにする</p>
<p><b>CN</b>   婴儿必须用不透明的眼睛保护来保护</p>	<p><b>CN</b>   使用防护围裙</p>	<p><b>CN</b>   检查警卫</p>	<p><b>CN</b>   保持锁定</p>
<p><b>M029 :</b> Sound horn</p> 	<p><b>M030 :</b> Use litter bin</p> 	<p><b>M031 :</b> Use table saw adjustable guard</p> 	<p><b>M032 :</b> Wear anti-static footwear</p> 
<p><b>TH</b>   ใช้สัญญาณ</p>	<p><b>TH</b>   ใช้ถังขยะ</p>	<p><b>TH</b>   ต้องใช้โต๊ะเลื่อยปรับระดับได้ที่มีที่ป้องกัน</p>	<p><b>TH</b>   สวมรองเท้าป้องกันไฟฟ้าสถิตย์</p>
<p><b>JP</b>   サウンドホーン</p>	<p><b>JP</b>   ごみ箱を使用する</p>	<p><b>JP</b>   テーブルソー調整可能なガードを使用</p>	<p><b>JP</b>   帯電防止靴を着用する</p>
<p><b>CN</b>   声音喇叭</p>	<p><b>CN</b>   使用垃圾箱</p>	<p><b>CN</b>   使用台锯可调保护装置</p>	<p><b>CN</b>   穿防静电鞋</p>

# HAZARD WARNING SIGNS (EN ISO 7010)

<p><b>W001 :</b> General warning sign</p> 	<p><b>W002 :</b> Warning; explosive material</p> 	<p><b>W003 :</b> Warning; Radioactive material or ionizing radiation</p> 	<p><b>W004 :</b> Warning; laser beam</p> 
TH ป้ายเตือนทั่วไป	TH วัตถุระเบิด	TH วัสดุที่มีกัมมันตภาพรังสีหรือรังสีไอออไนซ์	TH ลำแสงเลเซอร์
JP 一般的な警告サイン	JP 警告：爆発物	JP 警告：放射性物質または電離放射線	JP 警告：レーザービーム
CN 一般警告标志	CN 警告：爆炸物质	CN 警告：放射性物质或电离辐射	CN 警告：激光束
<p><b>W005 :</b> General warning sign</p> 	<p><b>W006 :</b> Warning; Magnetic field</p> 	<p><b>W007 :</b> Warning; Floor level obstacle</p> 	<p><b>W008 :</b> Warning; Drop (fall)</p> 
TH รังสีที่ไม่ใช่ไอออไนซ์	TH สนามแม่เหล็ก	TH ระดับพื้นช่องระดับ	TH ระวัง ตก (หล่น)
JP 警告：非電離放射線	JP 警告：磁場	JP 警告：フロアレベルの障害物	JP 警告：落下（落下）
CN 警告：非电离辐射	CN 警告：非电离辐射	CN 警告：地面障碍物	CN 警告：掉落（跌倒）
<p><b>W009 :</b> Warning; Biological hazard</p> 	<p><b>W010 :</b> Warning; slippery surface</p> 	<p><b>W011 :</b> Warning; Electricity</p> 	<p><b>W012 :</b> Warning; Guard dog</p> 
TH อันตรายทางชีวภาพ	TH ระวังลื่น	TH ระวังกระแสไฟฟ้า	TH ระวังสุนัขยาม
JP 警告：生物学的有害性	JP 警告：滑りやすい表面	JP 警告：電気	JP 警告：ガードドッグ
CN 警告：生物危害	CN 警告：光滑的表面	CN 警告：电力	CN 警告：看门狗
<p><b>W013 :</b> Warning; Fork lift trucks and other industrial vehicles</p> 	<p><b>W014 :</b> Warning; Overhead load</p> 	<p><b>W015 :</b> Warning; Toxic material</p> 	<p><b>W016 :</b> Warning; Toxic material</p> 
TH ระวังรถยก	TH ระวังวัตถุเหนือศีรษะ	TH ระวังสารพิษ	TH พื้นผิวร้อน
JP 警告：フォークリフトトラックおよびその他の工業用大型車両	JP 警告：オーバーヘッドロード	JP 警告：有毒物質	JP 警告：熱い表面
CN 警告：叉车和其他工业狗车	CN 警告：架空负载	CN 警告：有毒物质	CN 警告：热表面
<p><b>W017 :</b> Warning; Automatic start-up</p> 	<p><b>W018 :</b> Warning; Crushing</p> 	<p><b>W019 :</b> Warning; Toxic material</p> 	<p><b>W020 :</b> Warning; Toxic material</p> 
TH ระวังเครื่องจักรอัตโนมัติ	TH ระวังโดนหนีบ	TH ระวังศีรษะ	TH วัตถุไวไฟ
JP 警告：自動スタートアップ	JP 警告：粉砕	JP 警告：オーバーヘッド障害	JP 警告：可燃性物質
CN 警告：自动启动	CN 警告：破碎	CN 警告：架空障碍	CN 警告：易燃材料
<p><b>W021 :</b> Sharp elements</p> 	<p><b>W022 :</b> Warning; Corrosive substance</p> 	<p><b>W023 :</b> Warning; Toxic material</p> 	<p><b>W024 :</b> Warning; counter rotating rollers</p> 
TH ขอบมีคม	TH ระวังสารกัดกร่อน	TH ระวังหนีบมือ	TH คำเตือน: ลูกกลิ้งหมุนตัวมัน
JP シャープな要素	JP 警告：腐食性物質	JP 警告：手を粉砕する	JP 警告：カウンターローラー
CN 尖锐的元素	CN 警告：腐蚀性物质	CN 警告：压碎手	CN 警告：反转辊













<b>W025 :</b> Warning: Battery charging 	<b>W026 :</b> Warning; Optical radiation 	<b>W027 :</b> Warning; Oxidizing substance 	<b>W028 :</b> Pressurized cylinder 				
TH	อัตราประจุแบตเตอรี่	TH	มีการแผ่รังสีความร้อน	TH	ค่าเตือน; สารออกซิไดซ์	TH	กระบอกสูบอัดแรง
JP	警告: バッテリーの充電	JP	警告: 光放射	JP	警告: 酸化物質	JP	加圧シリンダ
CN	警告: 电池充电	CN	警告: 光辐射	CN	警告: 氧化物质	CN	加压器
<b>W029 :</b> Hand crushing between press brake tool 	<b>W030 :</b> Hand crushing between press brake and material 	<b>W031 :</b> Rapid movement of workpiece in press brake 	<b>W032 :</b> Barbed wire 				
TH	ระงับหนีมือขณะกดเครื่อง	TH	ระงับหนีมือขณะกดชิ้นงาน	TH	เครื่องจักรรอสสูง ระงับหนีมือ	TH	ลวดหนาม
JP	プレスブレーキツール間のハンドクラッシュ	JP	プレスブレーキと材料の間のハンドクラッシュ	JP	プレスブレーキにおけるワークピースの急速な動き	JP	有刺鉄線
CN	手压碎新闻制动工具之间	CN	手压碎新闻和材料之间	CN	在折弯机中快速移动工件	CN	铁丝网
<b>W033 :</b> Bull 	<b>W034 :</b> Falling objects 	<b>W035 :</b> Fragile roof 	<b>W036 :</b> Sudden loud noise 				
TH	ระงับวัว	TH	ระงับวัตถุหล่นจากที่สูง	TH	ระงับหลังคาแตก	TH	ระงับเสียงดัง
JP	ブル	JP	落下物	JP	壊れやすい屋根	JP	突然大きな騒音
CN	公牛	CN	坠落的物体	CN	脆弱的屋顶	CN	突然发出巨大的噪音









# PROHIBITION SIGNS (EN ISO 7010)

<b>P001 :</b> General prohibition sign 	<b>P002 :</b> No smoking 	<b>P003 :</b> No open flame; Fire, open ignition source and smoking prohibited 	<b>P004 :</b> No thoroughfare 
TH    ป้ายห้ามทั่วไป	TH    ห้ามสูบบุหรี่	TH    ห้ามจุดไฟ	TH    ห้ามผ่าน
JP    一般禁止標識	JP    喫煙禁止	JP    開いた炎はありません。 火災、発火源および喫煙禁止	JP    道はない
CN    一般禁止标志	CN    禁止抽烟	CN    没有明火；禁止打开点火源和禁止吸烟	CN    没有通路
<b>P005 :</b> Not drinking water 	<b>P006 :</b> No access for fork lift trucks and other industrial vehicles 	<b>P007 :</b> No access for people with active implanted cardiac devices 	<b>P008 :</b> No metallic articles or watches 
TH    น้ำดื่มไม่ได้	TH    ห้ามรถยก	TH    ห้ามผู้ป่วยหัวใจเทียม	TH    ห้ามวัตถุโลหะหรือนาฬิกา
JP    水を飲まない	JP    フォークリフトなどの産業車両へのアクセス不可	JP    医師的に認められた心臓装置を有する人へのアクセスできない	JP    金属製の物品や腕時計はありません
CN    不喝水	CN    叉车和其他工业车辆无法使用	CN    无法使用活动植入心脏装置的人	CN    没有金属制品或手表
<b>P010 :</b> Do not touch 	<b>P011 :</b> Do not extinguish with water 	<b>P012 :</b> No heavy load 	<b>P013 :</b> No activated mobile phones 
TH    ห้ามสัมผัส	TH    ห้ามดับไฟด้วยน้ำ	TH    ห้ามของหนัก	TH    ห้ามใช้งานโทรศัพท์มือถือ
JP    手を触れないでください	JP    水で消さないでください	JP    重い負荷なし	JP    起動した携帯電話はありません
CN    不要碰	CN    不要用水扑灭	CN    没有重负荷	CN    没有激活的手机
<b>P014 :</b> No access for persons with metallic implants 	<b>P015 :</b> No reaching in 	<b>P016 :</b> Do not spray with water 	<b>P017 :</b> No pushing 
TH    ห้ามบุคคลที่มีทรานปลูกถ่ายโลหะเข้า	TH    ห้ามสัมผัส	TH    ห้ามฉีดน้ำ	TH    ห้ามดัน
JP    金属製のインプラントを使用する人にはアクセスできません	JP    届かない	JP    水を噴霧しないでください	JP    ブッシュしない
CN    没有金属植入物的人进入	CN    没有到达	CN    不要喷水	CN    没有推动
<b>P018 :</b> No sitting 	<b>P019 :</b> No stepping on surface 	<b>P020 :</b> Do not use lift in the event of fire 	<b>P021 :</b> No dogs 
TH    ห้ามนั่งหรือวนนี้	TH    ห้ามเหยียบ	TH    ห้ามใช้ลิฟท์ในกรณีเกิดเพลิงไหม้	TH    ห้ามสุนัข
JP    座っていない	JP    表面に踏み込まない	JP    火災の際にはリフトを使用しないでください	JP    犬はいません
CN    没有坐	CN    没有踩在表面上	CN    发生火灾时请勿使用升降机	CN    没有狗
<b>P022 :</b> No eating or drinking 	<b>P023 :</b> Do not obstruct 	<b>P024 :</b> Do not walk or stand here 	<b>P025 :</b> Do not use this incomplete scaffold 
TH    ห้ามนำอาหารเข้า	TH    ห้ามวางวัตถุกีดขวางบริเวณนี้	TH    อย่าเดินผ่านหรือยืนค่อมบริเวณนี้	TH    ห้ามใช้บันไดงานช่าง
JP    食べたり飲んだりしない	JP    妨げないでください	JP    歩いたりここに立たないでください	JP    この不完全な足場を使用しないでください
CN    不吃东西或喝酒	CN    不要阻挡	CN    不要走路或站在这里	CN    不要使用这个不完整的脚手架

# PROHIBITION SIGNS (EN ISO 7010)










<p><b>P026 :</b> Do not use this device in a bathtub, shower or water-filled reservoir</p> 	<p><b>P027 :</b> Do not use this lift for people</p> 	<p><b>P028 :</b> Do not wear gloves</p> 	<p><b>P029 :</b> No photography</p> 
<p>TH ห้ามใช้อุปกรณ์ขณะอาบน้ำ</p>	<p>TH ห้ามใช้ลิฟท์นี้สำหรับโดยสาร</p>	<p>TH ห้ามสวมถุงมือ</p>	<p>TH ห้ามถ่ายภาพ</p>
<p>JP バス浴、シャワー、または水で満たされたリザーバーでこのデバイスを 사용하지 ください。</p>	<p>JP このリフトを人に使用しないでください。</p>	<p>JP 手袋を着用しないでください。</p>	<p>JP 写真はありません</p>
<p>CN 请勿将本设备用于浴缸、淋浴或充水储水器</p>	<p>CN 不要使用这种电梯的人</p>	<p>CN 不要戴手套</p>	<p>CN 没有摄影</p>
<p><b>P030 :</b> Do not tie knots in rope</p> 	<p><b>P031 :</b> Do not alter the state of the switch</p> 	<p><b>P032 :</b> Do not use for face grinding</p> 	<p><b>P033 :</b> Do not use for wet grinding</p> 
<p>TH ห้ามผูกปมเชือก</p>	<p>TH ห้ามสับสวิตช์</p>	<p>TH ห้ามใช้เครื่องขัดผิว</p>	<p>TH ห้ามใช้เครื่องขัดเปียก</p>
<p>JP ロープに結び目をつけないでください。</p>	<p>JP スイッチの状態を変更しないでください。</p>	<p>JP 面研削には使用しないでください。</p>	<p>JP 湿式粉砕には使用しないでください。</p>
<p>CN 不要在绳索上打结</p>	<p>CN 不要改变开关的状态</p>	<p>CN 不要用于面磨</p>	<p>CN 不要用于湿磨</p>
<p><b>P034 :</b> Do not use with hand-held grinding machine</p> 	<p><b>P035 :</b> Do not wear metal-studded footwear</p> 	<p><b>P036 :</b> No children allowed</p> 	
<p>TH ห้ามใช้เครื่องเจียรมือ</p>	<p>TH ห้ามสวมรองเท้าปุ่มโลหะ</p>	<p>TH ห้ามเด็กเข้า</p>	
<p>JP ハンド研削盤には使用しないでください。</p>	<p>JP 金属製の靴を履かないでください。</p>	<p>JP 子供はいません</p>	
<p>CN 不要与手持式磨床一起使用</p>	<p>CN 不要穿金属钉鞋</p>	<p>CN 没有孩子允许</p>	

# EMERGENCY AND FIRST AID SIGNS (EN ISO 7010)

<b>E001 :</b> Emergency exit (left) 	<b>E002 :</b> Emergency exit (right) 	<b>E003 :</b> First aid 	<b>E004 :</b> Emergency telephone 
TH    ทางออกฉุกเฉิน (ซ้าย) JP    非常口 (左) CN    紧急出口 (左)	TH    ทางออกฉุกเฉิน (ขวา) JP    非常口 (右) CN    紧急出口 (右)	TH    จุดปฐมพยาบาล JP    応急処置 CN    急救	TH    โทรศัพท์ฉุกเฉิน JP    緊急電話 CN    紧急电话
<b>E005 :</b> General prohibition sign 	<b>E006 :</b> Direction arrow (90° increments), safe condition 	<b>E007 :</b> Evacuation assembly point 	<b>E008 :</b> Break to obtain access 
TH    ป้ายบอกทาง JP    方向矢印45° (90° 単位)、安全な状態 CN    方向箭头45° (90° 增量)、安全条件	TH    ป้ายบอกทาง JP    方向矢印 (90° 単位)、安全な状態 CN    方向箭头 (90° 增量)、安全条件	TH    จุดรวมพลสำหรับอพยพ JP    避難集合点 CN    疏散集合点	TH    ทุบเพื่อเปิด JP    アクセスを得るために中断する CN    打破获得访问权限
<b>E009 :</b> Doctor 	<b>E010 :</b> Automated external heart defibrillator 	<b>E011 :</b> Eyewash station 	<b>E012 :</b> Safety shower 
TH    แพทย์ JP    医師 CN    医生	TH    เครื่องกระตุ้นหัวใจ JP    自動化された外部心臓細動除去器 CN    自动外部心脏除颤器	TH    ล้างตา JP    眼鏡ステーション CN    洗眼台	TH    ฝักบัวชำระ JP    安全シャワー CN    安全淋浴
<b>E013 :</b> Stretcher 	<b>E014 :</b> Child seat presence and orientation detection system (CPOD) 	<b>E015 :</b> Drinking water 	<b>R016 :</b> Emergency window with escape ladder 
TH    เปรียญพยาบาล JP    安全シャワー CN    安全淋浴	TH    อุปกรณ์ตรวจจับและระบุตำแหน่งและทิศทางของเด็ก (COPD) JP    チャイルドシートの存在と方向の検出システム (COPD) CN    儿童座椅存在和定向检测系统 (COPD)	TH    น้ำดื่ม JP    水を飲んでいる CN    饮用水	TH    หน้าต่างฉุกเฉินพร้อมบันไดหนีไฟ JP    エスケープラダー付きの緊急時のウィンドウ CN    带逃生梯的紧急窗口
<b>E017 :</b> Rescue window 	<b>E018 :</b> Turn anticlockwise to open 	<b>E019 :</b> Turn clockwise to open 	<b>E020 :</b> Emergency stop button 
TH    หน้าต่างหนีไฟ JP    レスキューウィンドウ CN    救援窗口	TH    หมุนทวนเข็มนาฬิกาเพื่อเปิด JP    反時計回りに回して開く CN    逆时针转动打开	TH    หมุนตามเข็มนาฬิกาเพื่อเปิด JP    時計回りに回して開く CN    顺时针旋转打开	TH    ปุ่มหยุดฉุกเฉิน JP    非常停止ボタン CN    紧急停止按钮
<b>E021 :</b> Door opens by pushing on the left-hand side 	<b>E022 :</b> Door opens by pushing on the right-hand side 		
TH    ประตูฉุกเฉินผลักมือซ้าย JP    左手側を押すとドアが開きます CN    通过推动左侧打开门	TH    ประตูฉุกเฉินผลักมือขวา JP    右手側を押すとドアが開きます CN    通过按压右侧打开门		



# FIRE FIGHTING EQUIPMENTS SIGNS

<b>A045R :</b> Direction arrow 45° 		<b>A090R :</b> Direction arrow 90° 		<b>F001 :</b> Fire extinguisher 		<b>F002 :</b> Fire hose reel 	
TH	ป้ายบอกทาง	TH	ป้ายบอกทาง	TH	ถังดับเพลิง	TH	สายดับเพลิง
JP	方向矢印45°	JP	方向矢印90°	JP	消火器	JP	消防ホースリール
CN	方向箭头45°	CN	方向箭头90°	CN	灭火器	CN	消防软管卷盘
<b>F003 :</b> Fire ladder 		<b>F004 :</b> Collection of fire-fighting equipment 		<b>F004B :</b> Collection of fire-fighting equipment 		<b>F005 :</b> Fire alarm call point 	
TH	บันไดเจ้าหน้าที่ดับเพลิง	TH	อุปกรณ์ดับเพลิง	TH	อุปกรณ์ดับเพลิง	TH	กริ่งแจ้งเหตุไฟไหม้
JP	火災のはしご	JP	消防設備の収集	JP	消防設備の収集	JP	火災報知器のコールポイント
CN	消防梯子	CN	消防设备的集合	CN	消防设备的集合	CN	火警呼叫点
<b>F006 :</b> Fire emergency telephone 							
TH	โทรศัพท์ฉุกเฉินสำหรับเหตุเพลิงไหม้						
JP	火災の緊急電話						
CN	消防应急电话						









## BI-DIRECTIONAL EMERGENCY AND FIRST AID SIGN

- Bi-directional signs provide excellent orientation in corridors, paths, passages or halls. Because of their design, they can be seen from a much wider angle.
- Offers 2 types of bi-directional signs: flag shape and V-shape.
- Mounted by using double sided adhesive tape or screws.
- Material: Polyvinyl Chloride

You have the option to request a personalized safety sign design featuring a pictogram selected from the EN ISO 7010 and TIS 635 range accompanied by text tailored to your preferences.

# CCTV SIGNS

<b>CC001 :</b> CCTV in operation 	<b>CC002 :</b> Caution Guard dogs 	<b>CC003 :</b> These premises are under CCTV surveillance 	<b>CC004 :</b> These premises are protected by video surveillance 
<b>TH</b> พื้นที่ติดตั้งกล้องวงจรปิด	<b>TH</b> ระวังสุนัข	<b>TH</b> สถานที่อยู่ภายใต้การเฝ้าระวังด้วยกล้องวงจรปิด	<b>TH</b> สถานที่อยู่ภายใต้การเฝ้าระวังด้วยกล้องวงจรปิด
<b>JP</b> 運用中のCCTV	<b>JP</b> 注意ガードドッグ	<b>JP</b> これらの建物はCCTV監視下にあります	<b>JP</b> これらの建物はビデオ監視によって保護されています
<b>CN</b> 央视正在运作	<b>CN</b> 小心警卫犬	<b>CN</b> 这些房屋在闭路电视监控下	<b>CN</b> 这些场所受视频监控保护
<b>CC005 :</b> These premises are under 24 hour CCTV surveillance 	<b>CC006 :</b> Security surveillance in operation 		
<b>TH</b> สถานที่อยู่ภายใต้การเฝ้าระวังด้วยกล้องวงจรปิดตลอด 24 ชั่วโมง	<b>TH</b> สถานที่อยู่ภายใต้การเฝ้าระวังด้วยกล้องวงจรปิด		
<b>JP</b> これらの施設は24時間CCTV監視下にあります	<b>JP</b> 運用中のセキュリティ監視		
<b>CN</b> 这些房屋都在24小时闭路电视监控下	<b>CN</b> 运行中的安全监视		



Photoluminescent signs will illuminate important messages . These visual communications outshine others, ensuring vital information remains visible and accessible in any situation.

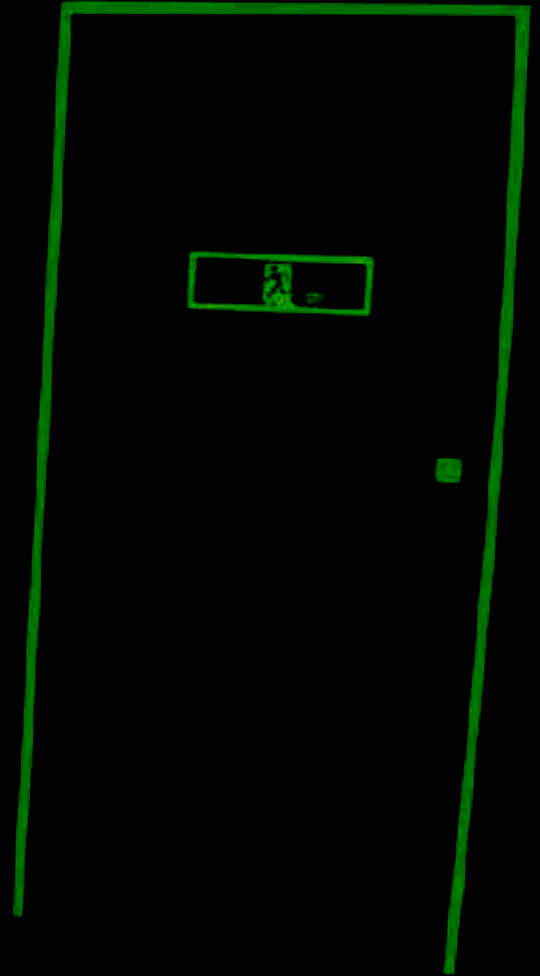
In any emergency, a photoluminescent safety message distinguishes itself from less critical information. International and national standards recognize the importance of photoluminescent signs. ISO 16069 outlines principles for visual components in Safety Way Guidance Systems, while German DIN 67510 emphasizes photoluminescent properties. Our products adhere to the most stringent European standards, equivalent to class C products.



# TRAFFIC SOLUTION

## BRIGHT & LUME

Anti-Slip Tape  
Luminative Traffic Equipments





Elevate workplace safety worldwide with our luminous tape and film. Introducing our premium luminous tape and film engineered to meet international standards, including JIS (Japanese Industrial Standard), DIN (Deutsches Institut für Normung), and TIS (Thai Industrial Standard).

Designed with quality and reliability in mind, our products provide unparalleled brightness to increase visibility and safety in industrial work areas, hospitals, or any buildings that require navigational lighting. They do not rely on electricity.



# GLOW IN THE DARK SOLUTIONS

## OUTDOOR & OFFSHORE GRADE

Application : To use as a guide for stairs in the dark, etc.



Application : Glow in the dark safety Signages , etc.



## LUMINOUS TAPE / SHEET

Width 12 / 25 / 50 / 122 mm.  
MOQ : 1 meter.

- for safety in darkness in case of emergency.
- Long-lasting glow according to world standards.
- Can be used either indoor or outdoor.
- Neither electricity nor battery required.



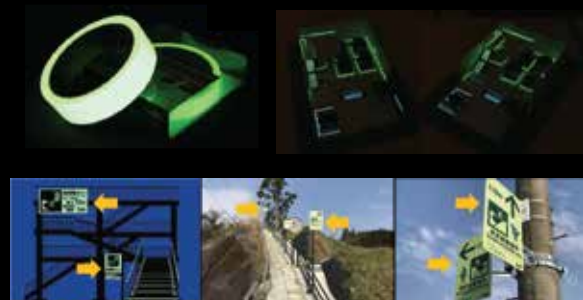
### According to DIN 67510 Standard

Product Class	Brightness after turned off the lights (mcd/m <sup>3</sup> )				Normal	In the Dark
	2 Min	10 Min	30 Min	60 Min		
Super Glow	2960	660	210	94		
DIN 67510-Class E (ค่ามาตรฐาน)	2200	520	170	70		
High Glow*	1406	292	91	40		
DIN 67510-Class D (ค่ามาตรฐาน)	1100	260	85	35		
Standard Glow**	986	226	67	29		
DIN 67510-Class C	690	140	45	20		

### Complied to standard

Product Class			
Super Glow	JIS Z 9107-Class JD	DIN 67510-Class E	ISO 3864-4
High Glow	JIS Z 9107-Class JC	DIN 67510-Class D	
Standard Glow	JIS Z 9107-Class JB	DIN 67510-Class C	

DIN 67510-4 : 2008-2 Sub-classification	Minimum luminance (mcd/m <sup>2</sup> ) after decay time of			
	2 min	10 min	30 min	60 min
A	108	23	7	3
B	210	50	15	7
C	690	140	45	20
D	1100	260	85	35
E	2200	520	170	70



Note : 3 mcd/m<sup>3</sup> is the lowest brightness that humans can see in complete darkness according to JIS standards.

# PRISM GLOW (HIGH LUMINANCE)

Width 122 mm. MOQ : 1 meter.

## Dual Function Film Reflective & Luminous (In single sheet)

- for safety in darkness in case of emergency.
- Long-lasting glow according to world standards.
- Can be used either indoor or outdoor.
- Neither electricity nor battery required.

Reflective color : White  
Luminous Color : Green



☑ JIS Z 9107    JA JB **JC** JD

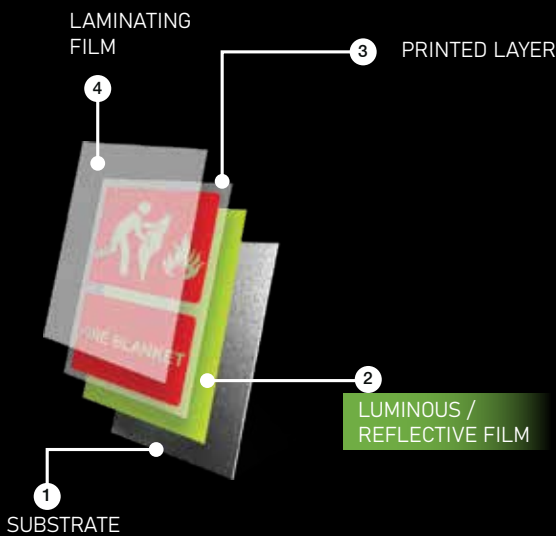
**luminance Quality**

Standard Tested		Minimum luminance (mcd/m2) after decay time of				
		2 min	10 min	20 min	30 min	60 min
JIS Z 9107	Tested result	1,024	278	149	100	48
Classification : JC	Standard	880	210	100	62	30



### Application

Construction layer of safety signages



**Luminance Quality According JIS Z9117:2011:**

Reflected light measuring angle	Reflectance value according to the angle of incident light** (place the prism horizontally / vertically)	
	5 Degree (cd/lxm <sup>2</sup> )	30 Degree (cd/lxm <sup>2</sup> )
12 (0.2°)	380 / 407	208 / 249
20 (0.33°)	256 / 267	148 / 167
30 (0.5°)	286 / 286	154 / 163
1.0°	54 / 61	43 / 39

\* Test value at an incident light angle of 30 degrees is higher than 80% of the reflectance value specified in Type 9 (Very high-intensity).  
According to Table 14 of the TIS 606-2459 standard.



# ANTI-SLIP TAPE

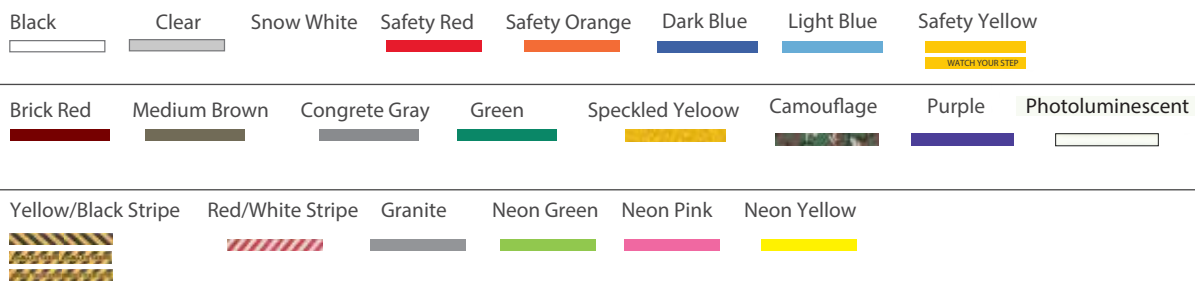
Heavily embossed anti-slip rubber coated PVC that has been engineered with an aggressive adhesive system to adhere to a wide variety of surfaces.



Meet the high quality standard

- OSHA
- ADA
- NFSI High Traction.

● Available Color



Designed for indoor and outdoor non-skid applications that require long-term anchorage to a wide variety of surfaces.



Anti-slip safety tape for high location.



Anti-slip tape for stair.



Floor Marker Tape.



Anti-slip tape for stair.



# CURB-STUD

## Glow and reflective curb stud Ultimate luminance

Meet ISO 22578 Class II Outdoor Standard

- Photoluminescent + Retroreflection
- Easy Installation and Costless

The special feature is "waterproof" so it can be used outdoor, weighs break point 1.5 tons. It brights in the dark green. It can be lighted in dark without electricity.

Model: NGMRS-1500

Good for safety application.

- ☑ ISO 22578 Class II Outdoor standard
- ☑ JIS Z 9097 TYPE II Outdoor standard
- ☑ JIS Z 9107 **JA JB JC JD**

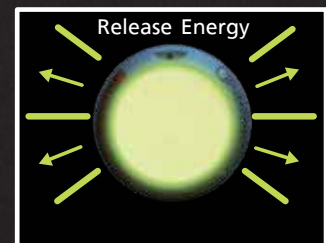
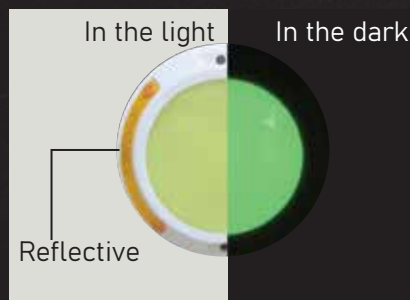
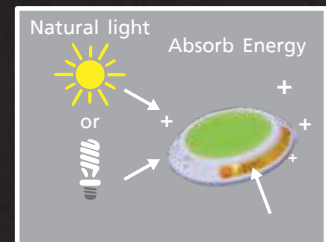
Dia 11 cm



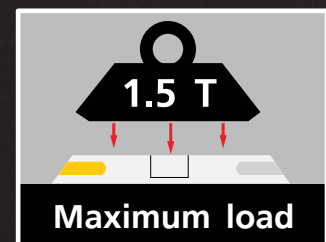
Installation : Epoxy glue / Screws  
Glow Color : Yellow - Green

### Application

Roadside | Walkside | Parkways | Cycle paths | Evacuation routes



Usage precaution





# ANTI-SLIP GRAPHIC FLOOR

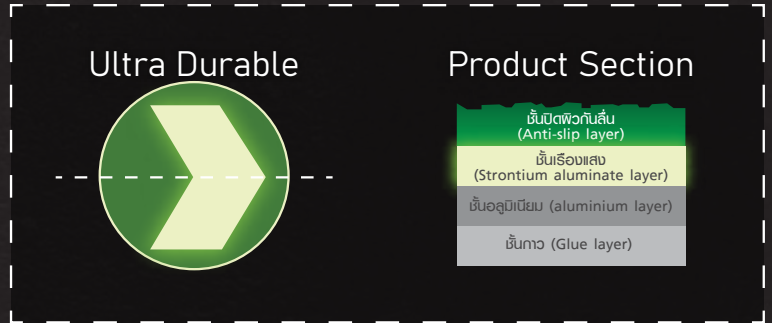
## High luminance glow in the dark

Create a customized sign for your space using our reflective and standard marker floor material, boasting excellent anti-slip features and easy adhesive application.

Dia 9 cm

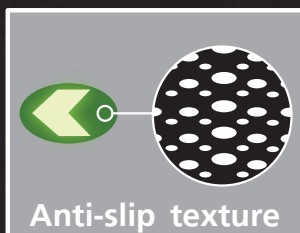
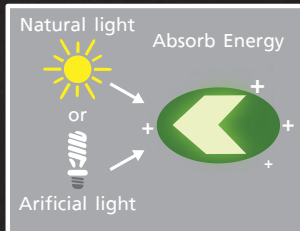


Installation : Epoxy glue  
Glow Color : Yellow - Green



<input checked="" type="checkbox"/> DIN 67510	A	B	C	D	E
<input checked="" type="checkbox"/> ISO 17398	A	B	C	D	E
<input checked="" type="checkbox"/> JIS Z 9107	JA	JB	JC	JD	

### Anti-Slip Custom Sign



After fully Charged, the Anti-slip Graphic Floor can glow more than **12 Hours**.

### Usage precaution

- Self - illuminating in the dark after absorbed light (rechargeable).
- If some part of product is shaded, that part may be not as glow as other.
- The product cannot glow without prior light absorption.  
Do not put the product in environment that has no light at all time.
- The product can be used outdoor but do not use in submersible condition.





# CONSPICUITY TAPE

Create a clear and different visibility  
of the vehicle than before.  
To ensure safety on the road

Compliance with regulations and guidelines, 3M offers local technical and regulatory support, helping you to comply with regulations and guidelines set out in Thailand roadway legislation, whilst providing guidance for correct application.

Studies and field tests conducted over a 10 year period show that well marked vehicles are 30 times less likely to be involved in road traffic accidents, compared with unmarked ones.<sup>2</sup>

Retro-reflective conspicuity tapes for vehicles have become essential tools in increasing the visibility of vehicles and reducing roadway casualties. The 3M range of vehicle conspicuity tapes using allows vehicles to be seen up to nine seconds earlier than unmarked vehicles, allowing for considerably longer reaction times.<sup>3</sup> In addition, they are highly durable, easy to apply, and meet or exceed regulations and guidelines set out in UK roadway legislation.

## DESCRIPTION

Reflective strip product group Using high-quality 3M™ microprism technology, it is designed to increase visibility to the sides and rear of vehicles. These reflective tapes and strips provide bright, clear-reflections at a wide angle. Almost 90 degrees from the perpendicular This ensures that your vehicle remains visible.

Can be seen clearly during the day, at night and in bad weather. The properties of our reflective tapes and stripes exceed NHTSA and ECE104 requirements and are DOT certified to ensure compliance with industry standards.



40 percent of collisions occur in the hours of darkness according to research by the Department for Transport, road casualty statistics show that 40 percent of collisions occur in the hours of darkness. Retro-reflective ECE104 vehicle conspicuity tapes have become vital tools in increasing the visibility of larger vehicles on the road at night and in poor weather conditions.

The 3M™ range of ECE104 Approved Tapes clearly outline the rear, sides and front of the vehicle. A marked HGV may be seen up to nine seconds earlier than an unmarked one, allowing for considerably longer reaction times.

## ECE104 RECOMMENDED COLOURS

Position on vehicle	Colours
Front	Yellow
Sides	Yellow or white
Rear	Red or yellow

Full contour markings



Partial contour markings



Contour markings should cover at least 80 per cent of the total length and width of the vehicle or trailer should be as close as practicable to the edges. There are two contour options available: full contour markings, or partial contour markings, the latter being the minimum requirement.



# STAMARK TAPE

3M™ STAMARK™  
HIGH PERFORMANCE  
ALL WEATHER TAPE



3M™ Stamark™ High Performance All Weather Tape Series 380AW (“Tape”) is a durable pavement marking tape that is highly retroreflective under both wet and dry conditions. The Tape utilizes specially designed optics to provide wet and dry performance. The Tape can be used as an inlay marking on new asphalt or as an overlay marking on most asphalt and concrete pavement surfaces in good condition.



380i ES White



381i ES Yellow

## SPECIFICATION

### Properties for Stamark

Color	- White and yellow according to standard traffic line colors.
Material	- The structure is made from a mixture of colorants. High quality polymer chemical material composition - There are reflective glass beads inside the tape. Coated with polyurethane for strength and durability
Plexiglass bead type	- Microcrystalline ceramic beads - There is a clear color for the white reflective traffic lines and there is yellow for the yellow reflective traffic lines. So that the traffic lines can be seen in the same color both during the day and at night.
Thickness	- About 1.6mm
Surface condition	- Asphalt or Concrete
Reflected Luminance At the angle 1.05°/ 88.76°	- White color = 500 millicandela / square meter / lux - Yellow color = 300 millicandela / square meter / lux
Installation	- Self-adhesive tape. Can be attached directly to the road surface.
Installation time	- Easy, Fast, no need to wait, traffic can be opened immediately.
Service life	- About 2-4 years (It may vary from road factors, vehicles, and driver behaviors)



# SAFETY & SECURITY FILM

## 3M™ ULTRA S600

3M™ Safety film is made from high grade polyester. With the best and patented technology from 3M, which provides features that support safety through safety testing at impact strength from 100-600 foot-pounds according to international standards ANSI Z97.1 (American National Standards Institute) and CPSC: Cfr16, Part 1201 (the Consumer Products Safety Commission). Therefore, glass equipped with 3M™ safety film can effectively absorb shock and prevent danger from shattered glass fragments. It will help to hold the broken pieces of glass, so they don't fall and can be blown out of the window.



### **Bomb Blast and Explosion Protection**

- Protects from flying glass fragments.
- due to the compression of the explosion This is one of the causes of injury or death from explosions.



### **Windstorm and Debris Protection**

- Reduces damage from water and landslides from storms.
- Help protect residents and various properties so that they can continue.



### **Safety Glazing and Human Impact**

- Improve the safety efficiency of the installed glass.
- Helps protect residents from broken glass that may be caused by actions by individuals.



### **Break and Entry**

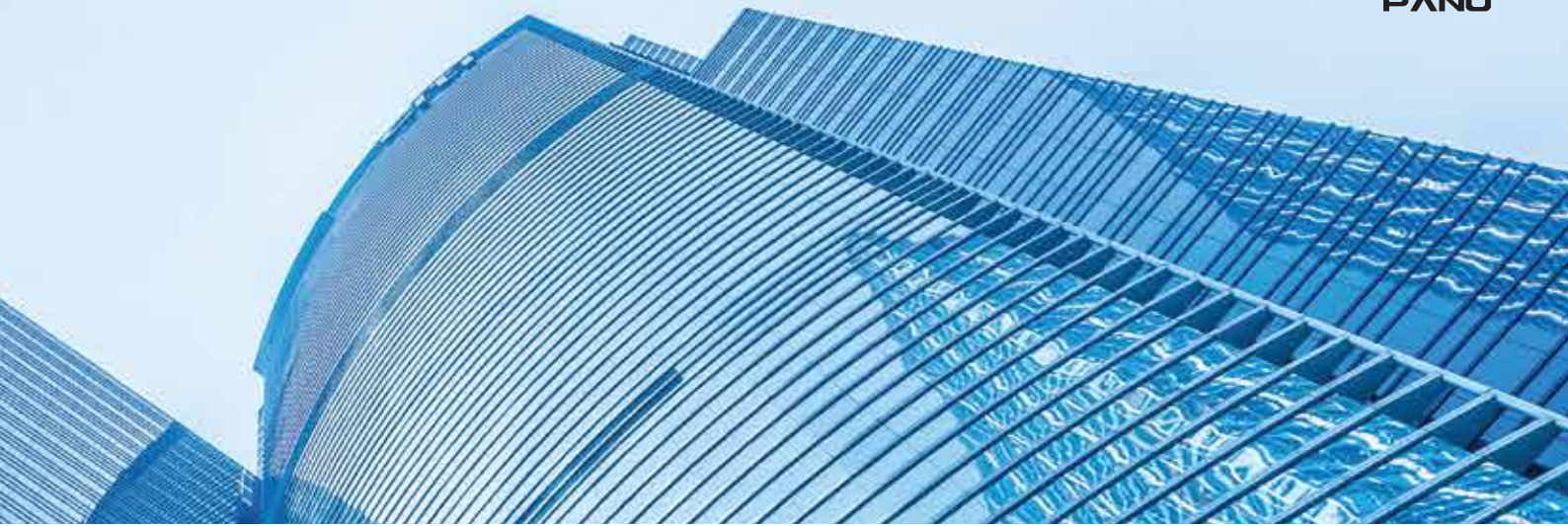
- Helps prevent and delay intrusion by people with bad intentions.
- Help protect residents property from thieves.



### **Seismic and Spontaneous Glass Breakage**

- Help to hold the glass when it cracks or falls from the window.
- Help to prevent and reduce injury to persons or damage that may occurred.





## DESCRIPTION

3M™ Safety Film Ultra S600 is designed to use on the inside surface of windows. This film has a unique multilayer construction based on nanotechnologies. Ultra Safety Films are 40 times more resistant against tearing than ordinary safety films of the same thickness. Therefore the resistance of glass / film to penetration and failure is significantly increased.

3M™ Safety Films provide an effective protection from injuries or damaged to items caused the fragments of broken glass. In case of glass breakage the fragments are hold due to the system of the adhesive.

## FEATURES

(on 6 mm clear glass)

Total solar energy reduction : 21 %

G-value : 0.79

Reduction of Glare : 2 %

Reduction of UV rays : 98 %

## STRUCTURE OF THE FILM

Thickness : 0,150 mm / 150 μ

Colour : Clear

Material of the film : Polyester

Adhesive : Special Acrylic

Top coating : Scratch resistant hard coat

## INSTALLATION

3M Window films are installed using water and a soap solution.

Full adhesion is reached after approximately 20 days at 18°C (in dry conditions).

## CLEANING

3M Window films may be cleaned 30 days after installation using ordinary window cleaning agents and avoiding the use of abrasive particles. Do not use rough sponges, cloths or brushes. Synthetic sponges, soft wipes or rubber squeegee cleaners are recommended. Do not clean 3M films dry.

## SPECIFICATION

GLASS TYPE	FILM TYPE	SC	VLR%	VLT %	EMISSIVITY	U-VALUE	G-VALU	TSER
SINGLE PANE								
Clear	No Film	0.94	8%	88%	0.84	1.06	0.82	18%
	Ultra S600	0.90	10%	84%	0.89	1.10	0.79	21%
Tinted	No Film	0.69	5%	50%	0.84	1.06	0.60	40%
	Ultra S600	0.68	6%	47%	0.89	1.10	0.60	40%
DOUPLE PANE								
Clear	No Film	0.81	14%	80%	0.84	0.50	0.70	30%
	Ultra S600	0.79	18%	73%	0.89	0.50	0.69	31%
Tinted	No Film	0.55	8%	45%	0.84	0.50	0.48	52%
	Ultra S600	0.55	8%	41%	0.89	0.50	0.48	52%



# VEHICLE GRAPHIC





Choosing the right film type for adhering to a particular surface is crucial for the film's longevity. Opting for an unsuitable film can significantly diminish its lifespan and potentially lead to issues.

Hence, we offer a diverse range of high-quality film tailored to different purposes, ensuring you find the perfect match for your specific needs.





**SPECIFIC PART**  
**CARGO**  
**CONTAINER**



**Transform your cargo container into a moving billboard with our dynamic car wrap.** with our high-quality sticker integrates onto your container, turning it into a powerful marketing tool. Whether you're transporting goods or parked at a bustling depot, captivate audiences and elevate brand visibility like never before. Take your advertising to new horizons

**FULL WRAP**

Make a statement on the road with our stunning full wrap car advertising. **Turning your vehicle into a powerful mobile billboard. Grabbing attention and leaving a lasting impression wherever you go.** Elevate your marketing game and stand out from the crowd with our full wrap solution.







## WRAP SOLUTIONS MEDIA FORMAT

## ELECTRO-CUT APPLICATION

Precision electro - cut application, our vibrant design will electrify your vehicle, showcasing your brand or your messages in style.

**Stand out from the crowd  
and make a lasting impression  
wherever you go.**



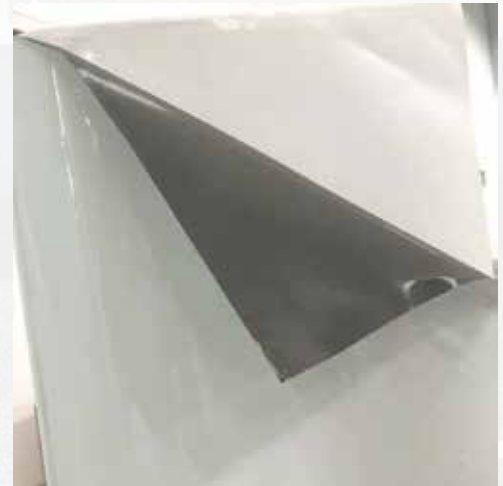


# FILM TYPE

We offer 4 types of wrap film, according to service condition and UV/Light exposition. in the conduction of light and its use

## OPAQUE FILM

Most of the time, the adhesive is an opaque color, such as gray. Light penetration is low, caused of bright and clear printed ink color. Common used for general applications such as cars and buildings.

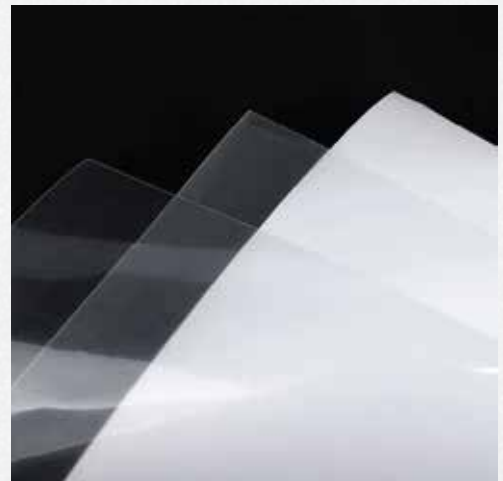
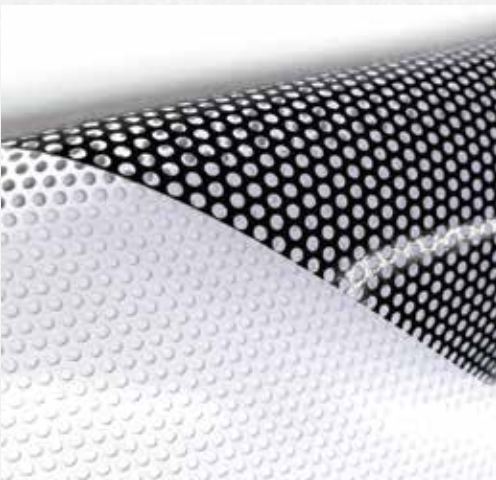


## TRANSLUCENT FILM

The level of light penetration through the film remains consistently high. This type of film is widely utilized in backlighting applications or for electrical cabinets.

## TRANSPARENT FILM

The visibility of objects through the film relies on the level of turbidity in both the film and adhesive. This type of film is commonly employed in glass installation or as a laminating film.



## SEE THROUGH FILM

Light can permeate through the openings in the film, often found in applications such as vehicle or building windows where visibility to the outside is desired.

# ADHESIVE TYPE

## REMOVABLE ADHESIVE

Used for short- and medium-term installations. Leaves no more than 30% glue residue when peeled off. (Does not damage the surface of the material)



## PERMARNANT ADHESIVE

Used for long-term installation or work that requires excellent adhesion. Leaves adhesive residue when peeled off. (In some cases, it may damage the surface of the material)





# UV EFFECT

Issues related to UV light impacting film are categorized into three distinct types as outlined below

## EFFECT TO WHITE FILM

Influence of UV light on the white film can fluctuate. Depending on the type of film and its chemical composition, exposure to UV light generally can cause white film to deteriorate and discolor over time. This may result in yellowish or brownish to white part of the color. Sometimes burns may occur. This affects both appearance and functionality.



## EFFECT TO CLEAR FILM

UV light can have detrimental effects on clear film, including yellowing, brittleness, degradation, and loss of clarity. Over time, exposure to UV radiation can cause clear film to develop a yellowish tint, become brittle and prone to cracking, degrade molecularly, and lose its transparency, appearing cloudy or hazy instead.



## EFFECT TO INK

UV (ultraviolet) light has significant effects on ink printing, including rapid curing, color fading, ink degradation, and substrate interaction. UV curing is a common technique where UV light dries and cures the ink quickly, resulting in a durable finish. However, prolonged UV exposure can lead to color fading as UV radiation breaks down ink pigments' chemical bonds. Ink degradation may occur over time due to UV exposure, affecting properties like adhesion and flexibility and diminishing print quality.





# FILM TECHNOLOGY

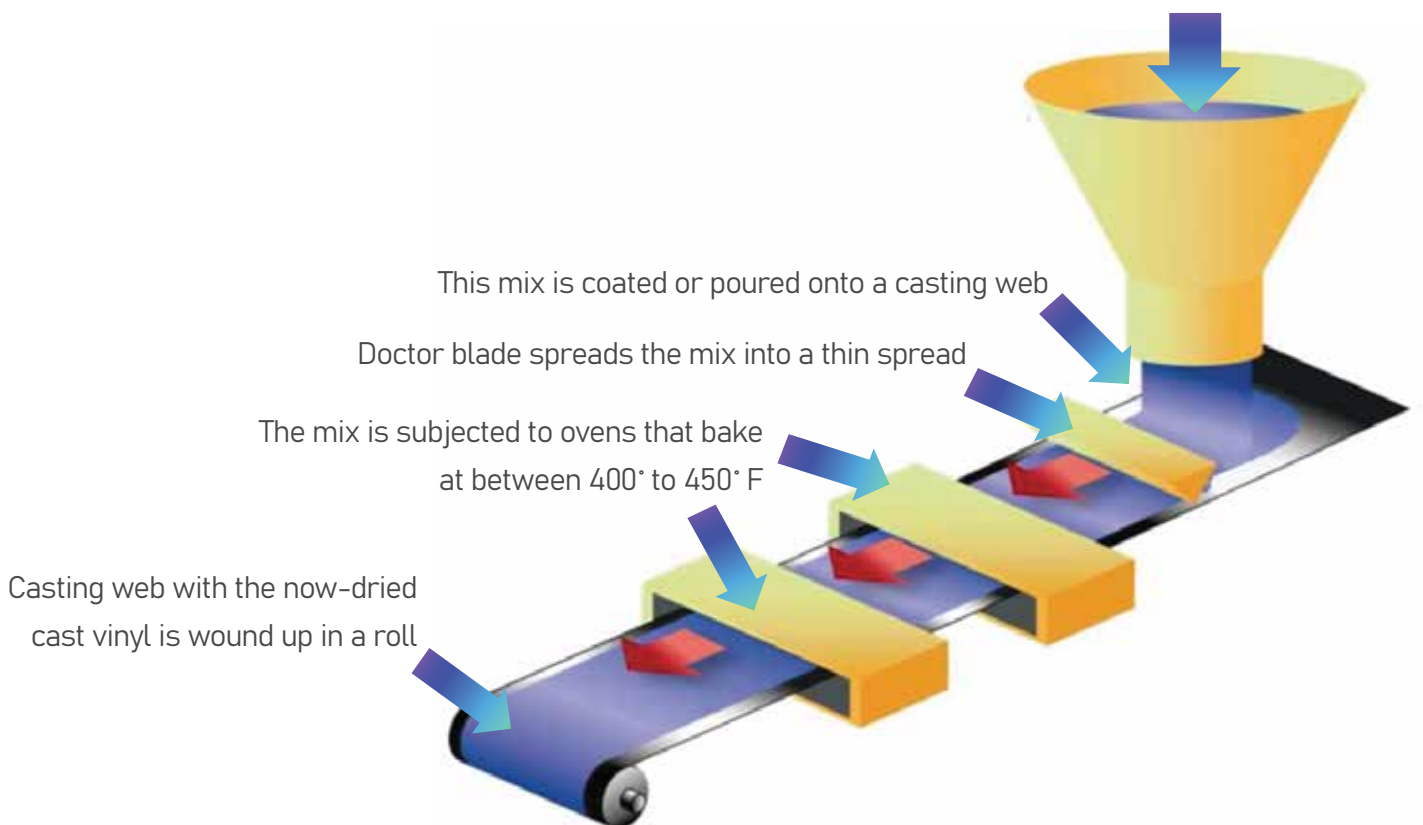
## CASTED FILM

Casting film refers to a manufacturing process used to produce thin, flexible plastic films. In this process, molten plastic is poured onto a polished, rotating drum or onto a flat surface, where it spreads out and cools rapidly to form a thin, continuous film. The resulting film can vary in thickness and properties depending on the specific requirements of the application. Casting film technology is commonly used in various industries for packaging, lamination, and other applications requiring flexible and durable plastic films.

### Characteristics

- Only 50 microns thick
- low shrinkage
- Durable and has a long service life.
- Highly flexible Can be installed on any surface  
Both the surface is curved and has a nut head.
- No chalk powder forms on the surface.
- Resistant to many chemicals

PVC resins, plasticizers, solvents, flame retardants etc in a liquid mix called organosol



# FILM TECHNOLOGY

## CALENDERED FILM

Calendered film refers to a type of film that is produced through a calendaring process. Calendaring is a manufacturing method in which a material, often plastic, is passed between heated rollers to create a thin, flat sheet with uniform thickness and smooth surfaces.

During the calendaring process, the material is typically heated and compressed between the rollers to achieve the desired thickness and surface finish. The rollers may have different configurations and textures to impart specific properties to the film, such as glossiness or texture.

Calendered films are commonly used in a variety of applications, including packaging, printing, laminating, and labeling. They can be made from different types of plastics, such as polyethylene, polypropylene, or PVC, and they come in various thicknesses and finishes to meet specific requirements.

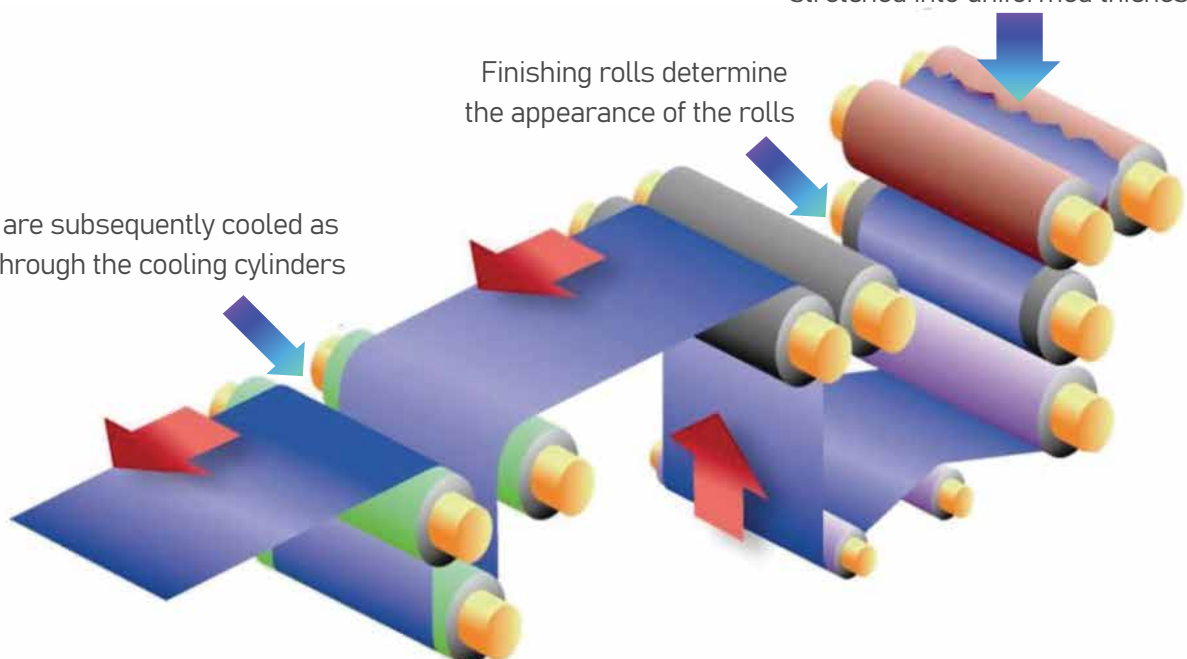
## Characteristics

- Thickness 75-100 microns
- High shrinkage
- Has a short to medium lifespan
- Can only be installed on smooth, slightly curved surfaces.
- Resistant to some chemicals

Solid particles are mixed, heated and kneaded into a molten state. Film is pulled and stretched into uniform thickness

Finishing rolls determine the appearance of the rolls

Rolls are subsequently cooled as they pass through the cooling cylinders



# FILM THICKNESS

Selecting a film whose thickness is not appropriate for the surface. It may cause problems with installation, causing damage to the work.

## EFFECT TO INSTALL

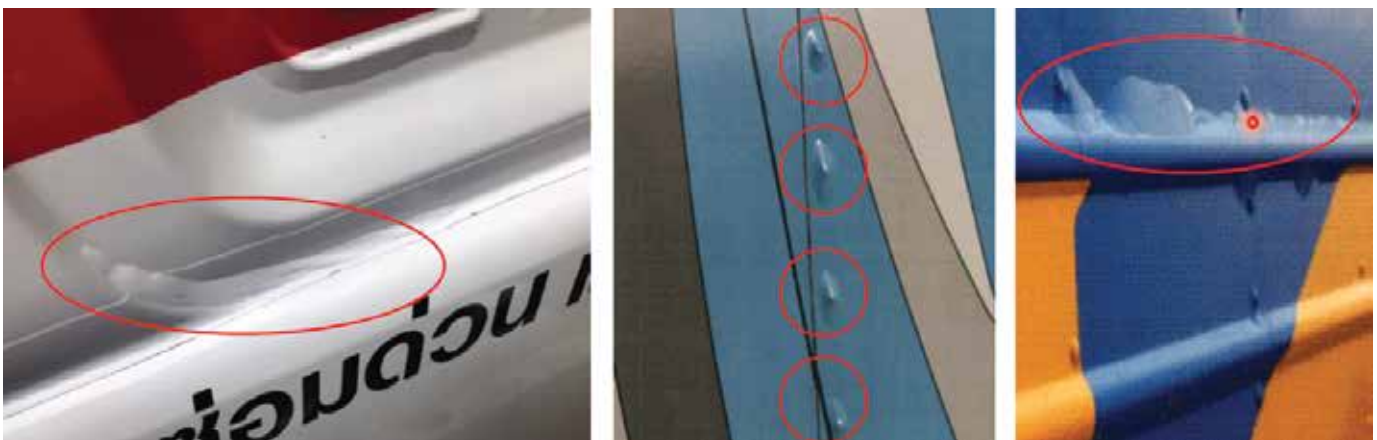
The thickness of the film used does not match the type of installation. May cause damage.

## FILM DOES NOT ADHERE TO THE SURFACE

When the film thickness exceeds the appropriate level, It can hinder the film's ability to adhere effectively to the surface of the material, resulting in poor bonding and potential detachment.

## FILM BOUNCES OFF THE SURFACE

A film that is excessively thick may exhibit a bouncing or recoiling effect upon contact with the surface, making it difficult for the film to adhere adequately.

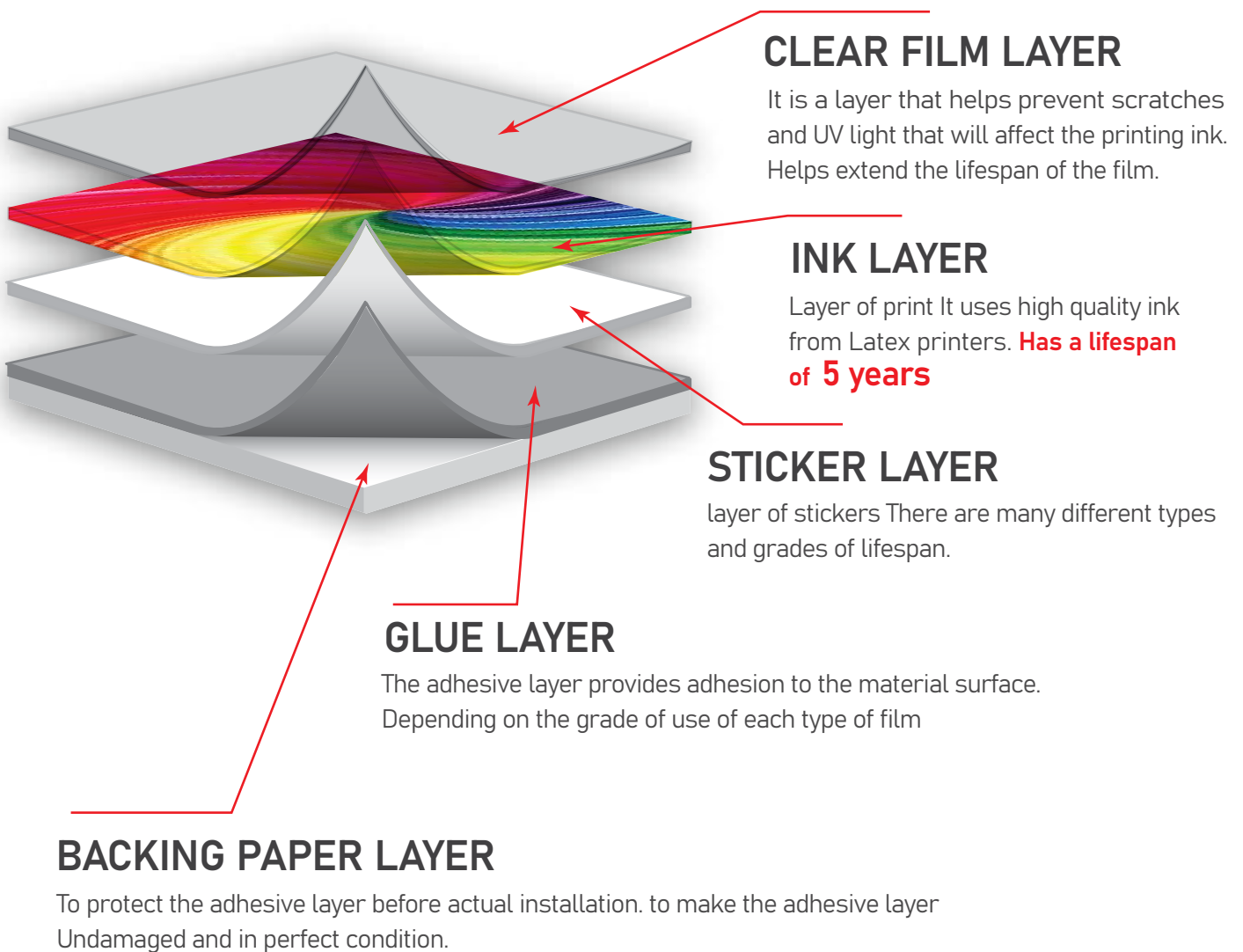


# FILM STRUCTURE

The structure of a film can vary widely depending on its intended use, manufacturing process, and desired properties. For example, a multi-layered film designed for packaging purposes may have distinct layers with specific barrier properties to protect the contents from moisture, oxygen, or light. On the other hand, a thin film used for decorative purposes may have a simpler structure with a single layer and a glossy or matte finish.

Film structure plays a crucial role in determining the film's mechanical strength, flexibility, transparency, adhesion, and resistance to environmental factors such as heat, humidity, and UV radiation. Understanding the film structure is essential for optimizing its performance and ensuring it meets the requirements of its intended application.

In general, the film structure consists of



# FILM FUNCTION

We have selected various types of film in various grades for use. To be suitable for use in various types and with maximum efficiency Each grade of use will have different properties and functions. To allow customers to choose and use appropriately

Service Life (Years)	Print Film	Lumination Film	Warranty	Warranty Scope	
			(Years)	Film	Ink
1-2	3M Scotchcal IJ16-10	-	1	✓	-
2-3	3M Scotchcal IJ16-10	3M Scotchcal 4156	1	✓	✓
3	POLI-PRINT 830	POLI-PRINT 700 Gloss	2	✓	✓
4-5	3M Scotchcal IJ8624	3M Scotchcal IJ40-114/8509	3	✓	✓
4-5	3M Envision 48/ 48C	3M Envision 8048G	3	✓	✓
6-7	3M Scotchcal IJ180mc-10	3M Scotchcal 8518	5	✓	✓
6-7	3M Scotchcal IJ680cr-10	3M Scotchcal I3619	4	✓	✓
6-7	Lumigrow High Grow	Lumigrow 3619	3	✓	✓
1-2	3M Scotchcal IJ1229	-	1	✓	-
3	3M Scotchcal SC30/S32	-	-	-	-
5	3M Scotchcal ISC50	-	-	-	-



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