

Technical Sheet

VizLite[™] DT PSA Photo luminescent Self Adhesive Film

Product Information

VizLite[™] DT PSA Photo luminescent film is a dimensionally stable, durable, multi-layered film with a permanent pressure sensitive adhesive with a PET backing sheet

VizLite[™] DT PSA is suitable for cutting by hand or can be machine cut, including profile cut. It is suitable for digital and screen printing to produce interior “glow in the dark” signs and markings, including safety signage in buildings, ships and trains. It can also be supplied with a UV resistant overlay making it suitable for limited outdoor use.

Design Features

VizLite[™] DT PSA consists of a patent pending formulation of Strontium Nitrate Photoluminescent pigment incorporated into a PU adhesive.

The Strontium Nitrate Photoluminescent material absorbs both natural and artificial UV light through electron excitation, which it then emits as an afterglow in low light or zero light. This afterglow will last up to 8 hours, with the first hour being the brightest. Each time the VizLite[™] DT PSA material is exposed to UV light it will recharge.

UV light charging times vary depending on the type of light but typically a charge in overhead florescent light will take ten minutes. More information on the properties of VizLite[™] DT PSA can be found on the technical leaflet.

Product Application

VizLite[™] DT PSA Photo luminescent material is recommended for use in safety signage, marking tapes, and can be incorporated into the design of badges, stickers, emblems and tapes garments where the wearer is working in low light or no light conditions such as Mining, Tunnelling, Traffic Management and Emergency Services.

Product Performance and Certification

VizLite[™] DT PSA Photo luminescent is tested by VTEC laboratories, New York to the following standard,

ISO 17398:2004 “Safety Colours and Safety Signs – Classification, Performance and Durability of Safety Signs” Clause 7.11

Sub Class	(mcd/m ²) at decay time (mins)			
	2 min	10 min	30 min	60 min
A	108	23	7	3
B	210	0	15	7
C	690	140	45	20
D	1,100	260	85	35

Average measurements taken from 3 samples of VizLite[™] DT are as below,

(mcd/m ²) at decay time (mins)			
2 min	10 min	30 min	60 min
1992	416	117	50
VizLite DT is classified as D as per ISO 17398:2004 5.5			

The above measurements are for VizLite[™] DT formulation across all product lines.

Main Characteristics

Property	Description
Visual appearance:	Glossy, Pale yellow green colour
Thickness:	0.2 – 0.22 mm
Adhesive colour:	White
Adhesive type:	Permanent pressure sensitive
Liner:	Clear film
Application temperature:	10°C - 38°C

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Product Converting

Cutting

VizLite[™] DT PSA is suitable for cutting using the following methods. Always follow the manufacturers instructions for safe operation.

- Suitable for cutting by hand using very sharp cutting tools or by manual or automatic guillotine
- Can be plotter cut to produce shapes, letters and numbers.
- Recommended pressure settings for plotter cutting are 130 PSI or 8.96 Bar
- Can be converted to produce tapes on a reel to reel slitter
- Cuts should be made from the photo luminescent surface

Suitable Application Surfaces

VizLite[™] DT PSA is suitable for application onto the following substrates;

Glass, Metal, Acrylic, painted surfaces,
Polycarbonate, Fibreglass, Correx, Foamboard,
Composite materials such as Dibond

Materials should have a smooth surface

Limitations of End Use

VizLite[™] DT PSA is not suitable for application on the following,

Corrugated surfaces, riveted surfaces, surfaces that may become contaminated by oil, petrol or grease. Surfaces that may be liable to outgassing such as Polyethylene, rough surfaces such as plasterboard, wallpaper and flexible surfaces.

Application

VizLite[™] DT PSA has a pressure-sensitive adhesive which adheres to the substrate upon contact even with only light pressure.

All surfaces should be clean, dry and smooth before application. VizLite[™] DT PSA is not repositionable.

Printing

VizLite[™] DT PSA is suitable for screen printing and printing on a large format digital printer with solvent inks. Tests should be carried out before printing to establish the correct colour required.

Storage and shipping

- Rolls should be stored in the packaging they are supplied in.
- Cut pieces should be stored flat
- Opened rolls should either be stored in their original packaging or suspended by the use of a rod through the middle of the roll.
- VizLite[™] DT PSA should be stored in an area that is cool, dry and with low humidity.
- Precautions should be taken to protect the material from coming into contact with perspiration, strong acids, or compounds containing high levels of sulphur or chlorine. Contamination by these substances may affect the aesthetic appearance of the VizLite[™] DT PSA
- During Transportation and Shipping it is best to keep an ambient condition.

Handling

- VizLite[™] DT PSA should be handled carefully in hot and humid conditions.
- The area in which the materials are handled may need the need of cooling or dehumidifying equipment to keep the area cool and dry.
- Avoid the contamination of the product with dirt, grease or solvents as this could produce staining

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Product Disposal

VizLite[™] DT PSA can be incinerated in a commercial or industrial facility or sent to a landfill site.

General Safety Information

Statement on Radio activity

VizLite[™] DT PSA uses phosphorescent technology, the formulation comprises of Strontium Nitrate based pigments along with other components.

Phosphorescent materials store and re-emit light because of their unusual property of trapping electrons in a higher state of movement. As light comes in contact with the VizLite[®] DT material, light photons are transferred to the material and give some of their energy to the electrons within it, causing the electrons to move to a higher energy state around their nucleus. While most photo luminescent materials allow their excited electrons to quickly return to a ground state, phosphorescent materials trap their electrons in a higher energy state for minutes or even hours.

It is the chemical reactions within phosphorescent materials that allow the light to be stored and re-emitted as a glow. These long persistent phosphors are not radio-active and do not contain any radioactive elements.

Important notice to Purchaser / Converter

Because of the unlimited variety of potential applications for products, BEFORE product use the converter and/ or product manufacturer must determine that the products are suitable for the intended use and are compatible with other component materials. The Purchaser is solely responsible for determining the proper amount and placement of products. While reflective products

enhance visibility, no reflective product can ensure visibility on safety under all possible conditions. Neither Viz Reflectives or any Viz Reflectives authorised converter shall be liable for any incidental, special or consequential damages relating to the use or inability to use the products regardless of legal theory used.

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