



...silicone
product guide...



Varn

Solutions to your press room problems...

For more than fifty years, we have earned the pressman's trust by providing quality products, designed for safety in use and protection to the environment. A continuous research and development programme linked with Day's technical support will ensure our position remains as No.1 in press room products.

Can we rest now?

Not if we want to keep your trust.



What is Silicone?...

Silicone is a high quality blend of Silicone Oils, compounds and surfactants diluted with water to form a stable emulsion which enables a variety of printing operations.

Why do we use Silicones?

Silicones are utilised to benefit a number of post print requirements including:

- Re-moisturising the web
- To provide slip
- To reduce static
- To prevent marking
- To protect the printed image
- To add rub resistance
- To enhance gloss

Why are there different solid grades?

Silicone is manufactured in different grades to complement a number of factors such as substrate, finishing processes and running speeds and coating types.

Can I use additional anti-static?

All Varn Silicones incorporate high levels of anti-static agents at the point of manufacture and are sufficient to meet the majority of customers' requirements. However should extra anti-static properties be necessary we would recommend the addition of **Varn Anti-static solution** at a 1-4% dosage.

Is dosage important?

For performance and economy the dosage of both Silicone and Anti-static solution is extremely important. As with all aspects of the printing process, "more is not always better". Varn's range of Silicones are supported by the Varn DI - 210 doser, which offers the following benefits:-

- Extremely accurate dosage of between 2-10%
- Economical use of Silicone
- Non electrical
- Maintenance free
- Easily installed

Does water quality make a difference?

Soft water is ideal when mixing Silicone and indeed R.O. water has proved to be very successful in producing a clean stable emulsion. Harder water can promote a surface scum that detracts from a uniform film on the applicator roller.

What is the shelf life of Silicone?

When stored between 3°C and 28°C in the original unopened containers Varn Silicones have a useable life of 12 months from the date of production. **These products should avoid freezing.** Silicone emulsions should not be allowed to freeze because when thawed the product will have separated and it is therefore impossible to reconstitute as a stable emulsion.

Features...

Uniform particle size

Advantages...

• economical in use

Benefits...

- cost effective
- increased mileage

Consistent viscosity

• even, uniform film

- optimum transfer
- improved mileage
- reduced marking
- enhanced quality
- eliminates fly

Exact blend of high purity silicone oil, waxes, anti-static agents and additional additives

• improved slip
• lower dosage required

- economical in use
- improved quality
- less wastage
- less downtime

Varn Silicone Maintenance System...

- Isolate supply or remove suction pipe
- Drain down recirculation tank (in accordance with local authority regulations.)
- Re-fill system with 1 part Fountclean to 10 parts water
- Allow system to re-circulate with flushing agent for up to 30 minutes
- Drain down and fill with fresh water to flush
- Re-connect silicone supply and re fill system to required dosage

Why choose Varn Silicone?...

- Day's advanced manufacturing capabilities and quality control procedures ensure the highest possible level of consistency, uniformity and stability.
- Day's commitment to excellence with its investment in state-of-the-art production facilities in Irlam, Greater Manchester.
- OEM approvals from Weko, Pfiefer and Dosatron.

Varn Silicone Range...

	SOLID CONTENT %	RECOMMENDED DOSAGE	BASE MATERIAL	WAX %	UV VARNISH	VISCOSITY CPS	CORROSION TEST	ANTI STATIC
FBS 3500	35%	4-12%	Silicone	Nil	No	<100	Pass	Yes
FBS 6500	60%	3-10%	Silicone	Nil	Yes	<100	Pass	Yes
Pro-Web Silver	18%	5-10%	Silicone	Yes	No	<800	Pass	Yes
Pro-Web Gold	26%	4-7%	Silicone	Yes	No	<800	Pass	Yes
Pro-Web Platinum	35%	3-5%	Silicone	Yes	No	<800	Pass	Yes
Pro-Web Titanium	50%	2-4%	Silicone	Yes	No	<800	Pass	Yes



Day International recognises the ever increasing demands of today's Heatset Market. As such a dedicated Polymer chemist meticulously evaluates the latest raw materials and manufacturing techniques in an ongoing research and development programme. This ensures that only the highest quality products are available to our customers. An example of Day's research and development is the new Pro-Web Range. Using the highest quality silicone oils, synthetic bases, waxes, optical brighteners **exclusive to Day**, the new Pro-Web Range have their own unique characteristics, however they meet the more exacting requirements of today's high speed presses >12m/s.

These quality products significantly reduce silicone fly from the applicator roller while enhancing the printed copy and therefore press performance.

Quality...

Quality is second nature to Day and attention to detail is of paramount importance. All raw materials are rigorously quality inspected to exacting standards before the manufacturing process begins. The same high standards are adhered to throughout the manufacturing process and only when all criteria are met is the product released. All Day quality control procedures conform to **ISO 9001**.

Environment...

As a manufacturer of speciality chemical products, we recognise that many of Day's processes and procedures have the potential to provide an environmental impact. Protection and enhancement of the environment have always been of paramount importance to Day. With the introduction of **ISO 14001**, Day have now put in place the structure to continually assess and improve our commitment to environmental issues.

Benefits...

Day International use only the latest manufacturing techniques to produce the highest quality product available. This ensures product stability, consistency and the highest possible performance on press.

Technical Support...

Day International have a full team of people and products that can help you resolve any problems that your pressroom may be experiencing. The team fully understand Silicone application and the various control systems used on press. They are committed to working with our customers to ensure the correct choice and application of the Varn range of Silicones to combine performance and economy.

Can I overprint with a UV varnish?...

Defining excellence...

Day does not recommend the use of Silicone wax emulsions with U.V. Varnishes. Silicone is by nature an extremely high slip product that will dramatically decrease the surface tension of the printed surface. Silicone concentration should therefore be kept to a minimum. It is also important to note that choice of varnish will influence the inter-coat adhesion between ink and varnish which subsequently affects the scratch and rub resistance of the printed product.

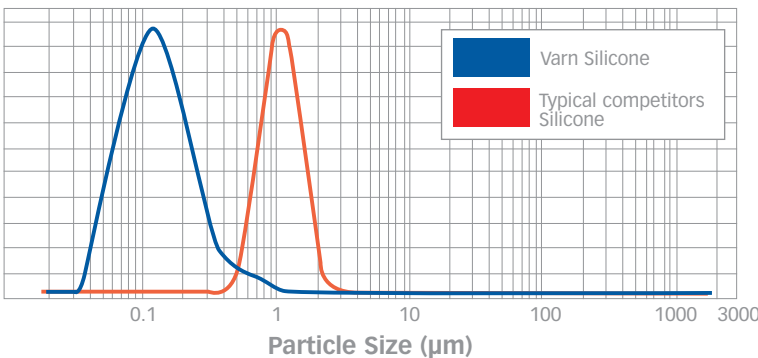
Laboratory analysis and field tests have confirmed it is possible to overprint UV Varnish on FBS 6500 providing the correct combination of ink and varnish is used to prevent reticulation. Please consult your ink/varnish manufacturer.

Do I need to keep my system and holding tank clean?...

The simple answer is yes. Day International's range of Varn Silicones incorporates optimum levels of the latest Biocides to minimise the risk of bacterial/fungal growth forming in the bath and pipework. If the maximum flow rate of the Silicone is not maintained it will affect the volume of solution in the pan, therefore compromising performance.

Whilst all possible preventative measures are taken at the point of manufacture we would recommend the Varn Silicone Maintenance System to ensure optimum performance and economy.

Particle size distribution graph...



Optimise Your On-Press Performance

Over the years, Day's printing technologists and pressroom chemists have learned the dynamics between pressroom chemicals and printing blankets play a vital role in on-press performance and profitability. And they've learned how to analyse these dynamics to help printers resolve problems and optimise their printing results.

Day's laboratory experts, technical support team and sales consultants work together with printers to recommend the right combination of pressroom chemicals and printing blankets to achieve optimum performance. A consultative service offered only by Day International.



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