

Only pendant lighting - typically used over aquaria as in this case - is now exempt from IP67 regulations



Vivarium safety

New products of all types for reptile-keepers are being launched by manufacturers and importers every month, ensuring that the hobby has never been better-served, thanks to the choice of equipment now on offer. Unfortunately, although the vast majority of the available products do exactly what they claim, not all is as safe as it should be. John Courteney-Smith investigates.

Reptile-keeping and husbandry methods are improving every year. This is very apparent from the number of species now being bred, as committed enthusiasts study their animals and enthusiastically adopt new technology which can help to achieve better results.

In turn, more people are entering the hobby too, confident that their animals will thrive using the technology that is now available. But in amongst this enthusiasm and the massive increase in the number of products on the market, it is proving impossible to stop some unsuitable and even dangerous items becoming available. There are also more countries involved in manufacturing vivarium equipment now, so that supervision is harder anyway.

Waterproof fittings

There are some general rules already in place though, and these have had an impact on the products being sold both within the aquatic and reptile sectors. One such law relates to the water-proofing of

equipment. It is now a legal responsibility for manufacturers to make any fitting that is going to be used on or over an aquarium or wet vivarium waterproof, in order to gain IP67 approval. The only exemption is for pendant lighting that is hung over an aquarium or enclosure and not touching or fitted to it in any way.

Lighting controllers for vivariums that have mist or rain units or incorporate wet areas are also required to comply with IP67. Only if you have a truly desert environment, housing uromastix perhaps, then this would not be necessary. Always make sure therefore that any light fitting you use for wet or arboreal species is marked with the EU IP67 mark.

Never be persuaded to buy or use non-IP67 fittings as these are potentially highly dangerous. An IP67 fitting incorporates a waterproof lamp holder. This is usually in the form of the lamp holder and a waterproof fitting ring which is placed over the lamp, and then screwed back over the lamp holder, thereby providing a seal against moisture. These fittings are stamped IP67, confirming they meet this requirement.

Ultra-violet (UV) lighting

Use information from independent testing sites when choosing UV lamps. Make sure that the lamp you purchase is suitable for your chosen species and will have a stable UV output for at least a year. Most lamps available advertise the percentage of UV emitted before the first 100 hours burning in period. Some of the lamps stop emitting UV at around 3 to 4 months.

There has also been a documented UVC risk with these cheaper lamps. This is potentially lethal to your animals and could cause long-term damage to your eyes and skin as well. European lamps are much safer and constant in their UV output than lamps imported from China. In addition, these slightly cheaper lamps are using very old technology and cannot provide your animals with good quality stable UV for the required time in some cases. Always use a quality reflector to maximise the light and UV available to your pets. Reflectors should be changed at least once a year when you change your UV lamps. ▶

Buying a secondhand setup

There may come a time when you decide to buy a secondhand vivarium, but even if you are just acquiring this as spare housing, do bear in mind the cost of replacing the key electrical components in the unit. When you take into consideration other factors, including the possibility that parasites such as snake mites could be lurking here too, it may not seem such a bargain.

Firstly, you need to check that the fittings comply with IP67 rules. Then as far as the lighting is concerned, check the UV source and measuring its output with a meter, or simply replace it. Disinfect the interior of the vivarium carefully, stripping down the unit and keeping water away from the electrical components. If you intend to keep snakes, seal any gaps in the unit with an aquarium sealant, to reduce the possibility of providing retreats for snake mites, and treat the enclosure with a special preparation to kill these parasites.



Snakes such as green tree pythons which climb around their quarters are particularly at risk from burns

The vivarium environment

Vivariums must also have vents to allow air circulation. It is important that a through draft of air is provided. Snakes for example can easily suffer from acute respiratory infections if housed in poorly-ventilated surroundings, as may tortoises.

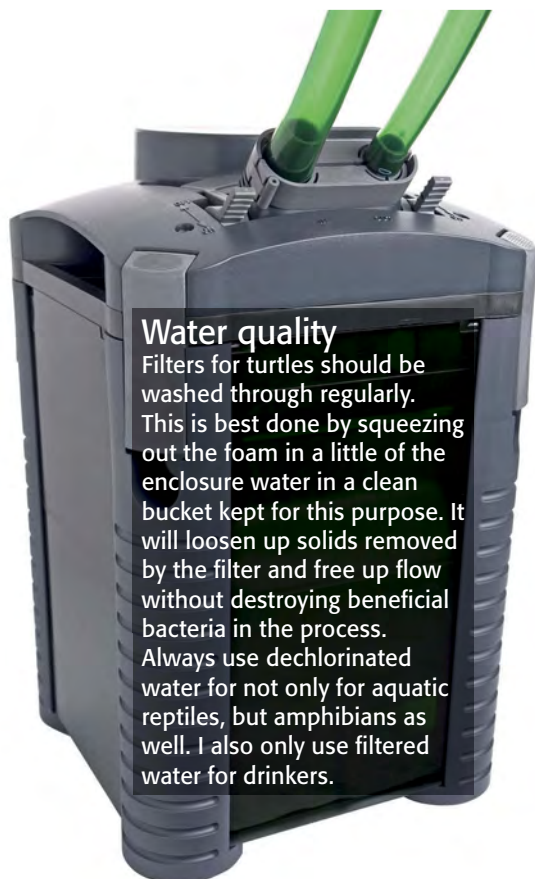
I personally believe that heat-light dispersal systems are definitely a bad idea, as far as vivariums are concerned. These units work by having fans which

blow heated air around an enclosure. This makes it impossible to create the thermal gradient that is essential to reptile life, as such systems will result in an even temperature being created throughout the entire vivarium. On the other hand, it is essential that reptiles can thermoregulate, and this ability is also necessary for the production of vitamin D₃.

Beware of the type of lighting that you choose too. It is not currently possible

for G10 kitchen type lamps to emit the required amounts of UVB. Any fittings should be tested with a solar meter before purchase. A heat-light dispersal fitting using such lamps may not provide any UVB at all.

Anything placed in front of a reptile lamp could cut out all or much of the UV produced. Wire mesh can stop as much as 80% of the UVB being transmitted into the vivarium. If you are using vivariums



Water quality

Filters for turtles should be washed through regularly. This is best done by squeezing out the foam in a little of the enclosure water in a clean bucket kept for this purpose. It will loosen up solids removed by the filter and free up flow without destroying beneficial bacteria in the process. Always use dechlorinated water for not only for aquatic reptiles, but amphibians as well. I also only use filtered water for drinkers.



Basking under a UVB source helps to replicate natural sun-bathing behaviour in turtles.