COOLON
LED Lighting Products & Solutions

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Product Operation Notice

Notice ref: **CL-PON-EMP-300320**

Date: 2nd of April 2020

Product: Coolon Emergency Pack

Dear valued customer,

Some of our external Emergency Packs (EMP) have recently been reported to experience enclosure deformation and/or rupture. While the number of reported cases is very low (< 0.07% of units), we urge all users of the EMP to take the recommended action to eliminate any potential risk.

This notice supersedes our previous notice **CL-PON-EMP-230419** which was issued in April 2019 relating to the use of Lead Crystal batteries within the emergency packs. This notice is applicable to all EMP units which do not have a High Capacity Breather Valve installed – circled in top right image.

Issue Summary

Batteries used in the reported units have been discovered to produce substantially higher levels of hydrogen (H_2) than indicated by OEM specification and test laboratory reports. Battery OEM expectation is that the volume of outgassing is so low that it is considered negligible over the lifetime of the battery and as such it can be used in a sealed enclosure. Coolon investigations have found the outgassing of H_2 from these batteries can be in quantities enough to create a volatile concentration within the enclosure. This may lead to product damage including deformation and/or rupture to the enclosure.

The outgassing appears to be a product of either electrolyte contamination and/or an unequal state of charge of cells resulting in one or more cells reaching charge capacity substantially earlier than others. The structural design of the battery prevents gas leakage resulting in gas build-up in the individual cells. A significant quantity of hydrogen can be rapidly released into the enclosure once sufficient pressure is built up in the cell(s) to lift the glued battery cover. The volume of hydrogen released may create a volatile mixture. EMP units fitted with breather valves were designed to allow hydrogen to escape at an ample rate under constant (high) outgassing conditions. Thorough testing confirmed they behaved as designed. However, these vents do not cope with situations in which a battery rapidly releases a large volume of gas. To address this situation, the High Capacity Breather Valve must be used as it allows for higher rate of gas egress and if the gas was ignited the valve can cope with the rate of change of pressure with no damage to the EMP and no danger to any nearby personnel.

Fault Rectification

We recommend that all external EMP units be fitted with our High Capacity Breather Valve. This valve has been designed and verified to provide safe operation by preventing opportunity for volatile hydrogen concentration build up.

Please contact and advise us of the number of active external EMP units on your site so that we may provide you with the necessary valves and safe work instructions.

We apologise for any inconvenience this unforeseen issue may have brought to your business operations. As always, we will work with each customer to offer the most suitable solution to ensure a speedy conclusion to this issue.
We thank you again for choosing Coolon and should you have any questions or concerns regarding this matter, please contact us on 1300 287 533 or email support@coolon.com.au, quoting this notice reference code **CL-PON-EMP-300320**.

Kind regards,

Eddie Kadic
Quality & Compliance Manager