LI-ION TAMER BUMP TEST KIT APPLICATION NOTE

This Application Note outlines how to locally source the required materials for the Li-ion Tamer diethyl carbonate (DEC) Bump Test Kit.

Li-ion Tamer Rack Monitor (GEN 2+)

Li-ion Tamer GEN 3

Honeywell

Note: *There are hazards associated with the handling of DEC. Make sure to carefully read the associated MSDS before use.*

INTRODUCTION

The Li-ion Tamer Bump Test Kit is used for bump testing of sensors, which must take place during the commissioning and maintenance processes.
The following sections detail the required materials, how to make a bump test kit and the bump testing procedure.

REQUIRED MATERIALS

A single bump test kit is comprised of the materials listed below:

- Diethyl Carbonate (DEC ≥99%) – CAS-No. 105-58-8[1]
- DEC Test Bottle (LDPE): Boston Round Squeeze Bottle with 24-410 cap size – 8 oz (minimum)



- DEC Test Bottle Cap: Flip Top Cap with 24-410 cap size



- DEC Storage Bottle: Nalgene HDPE IP2 Bottle, leakproof



ASSEMBLY

The recommended assembly procedure is as follows:

1. Dispense approximately 20 mL of DEC into DEC Storage Bottle using a syringe or funnel. Immediately clean up any spilled DEC.
2. Secure the lid to the DEC Storage Bottle.
3. Appropriately label both the DEC Storage Bottle and DEC Test Bottle according to your company's best practices, based on MSDS warnings.

BUMP TEST PROCEDURE

Follow the procedure below to correctly test sensors.



Note: *Use proper personal protective equipment when transferring liquid between bottles. It is important that the DEC test bottle never be turned upside-down during use and is not intended to be refilled.*

Required Materials for Testing:

- DEC Test Bottle
- Latex gloves (recommended)
- Safety glasses (recommended)

How to Use:

1. Carefully pour liquid from DEC Storage Bottle into DEC Test Bottle.
2. Position the DEC Test Bottle relative to the desired sensor, as shown in the below example.



3. Open the tab on the cap.
4. Firmly squeeze the bottle to release a puff of headspace gas towards the sensor face.

   WARNING: *Avoid ejecting liquid from the bottle, especially onto the sensor. If the sensors were recently powered on, wait at least 30 minutes prior to testing.*
5. Proceed to bump test all sensors, close the tab on the cap and observe the sensors' responses.

Notes:

- *If the test liquid is being shipped, transfer the liquid back into the small, leak-proof bottle.*
- *To maximize the test liquid lifetime, store it in the small bottle.*

FURTHER SUPPORT

Contact a Honeywell office or distributor for further information.

[1] Suggested DEC supplier: https://www.sigmaaldrich.com/IN/en/collections/offices?gclid=Cj0KCQjwho-lBhCARIsAMpgMofLMpxn6mQD9fDME4GFdpeZ1M5GIDsaC54vsNypyY0rbHvO3HBc_QaAldpEALw_wcB&gclsrc=aw.ds

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