

Date: January 2018

Subject: CX Containers Air Shipment Statement

To whom it may concern:

In January 2007, the International Air Transport Association (IATA) published updated regulations with a new Special Provision against UN 1977 – Nitrogen, refrigerated liquid excepting “dry shippers” containing non-dangerous goods from the regulations. Special provision A152 replaces the IATA special provision A800, which has now been deleted.

There are two sections of the regulations which apply to Worthington Industries Inc.’s cryogenic shipping containers. They are:

PI202-PACKING INSTRUCTION 202, Open cryogenic receptacles, IATA Dangerous Goods Regulations 49th Edition.

This Section specifically addresses non-pressurized packaging for holding refrigerated liquids. The “Special Provisions” are referred to in Column M of the List of Dangerous Goods and the information contained therein is additional to that shown for the relevant entry.

A152 - Insulated packagings containing refrigerated liquid nitrogen fully absorbed in a porous material and intended for transport, at low temperature, of non-dangerous products are not subject to these Regulations provided the design of the insulated packaging would not allow the build-up of pressure within the container and would not permit the release of any refrigerated liquid nitrogen irrespective of the orientation of the insulated packaging.

PI602-PACKING INSTRUCTION 602, Specific Requirements, Substances consigned in liquid nitrogen, IATA Dangerous Goods Regulations 49th Edition.

This Section addresses the packing of infectious substances, the requirements for “primary and secondary” packaging, and the placement of the substances in a liquid nitrogen shipper. The primary receptacle and the secondary packaging must maintain their integrity at the temperature of the refrigerant used.

We have consulted IATA to obtain clarification of this regulation. IATA has confirmed that once the infectious material is packaged according to Packing Instruction 602, it may then be placed inside a properly charged CX Series cryogenic shipping container and shipped according to the relevant IATA regulations.

If the samples being shipped are hazardous or infectious, the shipping container must comply with the applicable Packing Instructions in IATA Dangerous Goods Regulations 49th Edition. The CX dry shipper’s purpose is to keep its contents frozen during the shipping phase by using a

porous material in the container that absorbs the liquid nitrogen. Any liquid nitrogen not absorbed is poured out prior to shipping. All Worthington Industries, Inc. CX Series cryogenic shipping containers are built to conform to the requirements of the IATA Packing Instructions referenced above. Please note also that the shipping cases supplied by Worthington Industries, Inc. for protection of the CX Series vessels are atmospheric pressure cases and are designed as non-pressurized packaging.

IATA does not carry out testing or issue approvals for goods which are to be transported by air. For further information, you may contact IATA directly at:

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