

Name: Transactive-20 Package Type B(U)F



Certification

The Transactive –20 Package is certified to IAEA Regulations as a Type B(U)F package and can be transported by Road, Rail and Sea.

Description

The Transactive –20 Package is a specially designed and built, steel clad, cork insulated, ISO container approximately 6m long x 2.4m wide x 2.6m high. It is fitted with a stainless steel inner containment vessel, which has an internal volume of 14m³ and a gross payload of 6.5 tonnes. Within the containment vessel the material to be transported is secured by the use of appropriate internal furniture. The large sealed hydraulic rear access opening provides easy access to aid in the loading and unloading of the contents. The Transactive-20 was designed primarily to ship solid plutonium contaminated material (PCM) in drums. Carousels have been designed to secure the drums within the containment vessel, however the fitting of alternative internal furniture to allow a greater variety of material to be carried can further enhance the payload capability. To increase the load flexibility, the Certificate of Approval can be modified under certain circumstances to meet customer's specific needs, not currently within the constraints of the permitted contents. Type A approvals for the package can be considered to transport large items meeting Type A requirements.

Permitted Contents

The Transactive-20 Package combines vast payload potential with operational flexibility. Typical load contents include up to 30 standard 227-litre drums of contact handled Intermediate Level Waste or five 500-litre drums of contact handled Intermediate Level Waste depending on the internal configuration chosen. Additional load options include a variety of solid operational waste materials and normal decommissioning waste. Approval has also been granted for the transporting of medical irradiators and other forms of remotely handled intermediate waste. Up to 3kg of fissile material can be shipped in this package. In addition, the contents may include solid materials that are non-radioactive or non-contaminated where separation is not practicable.

Examples of Use

Shipments totalling 24 tonnes of plutonium contaminated material (PCM) have been transferred between two UK nuclear sites.

Type A certification is being sought to enable shipment of a loaded container with an expired Certificate of Approval.

Loading Illustration



Figure 1. Standard 227 litre drum being loaded into a carousel

Ancillary Equipment

For the loading of the primary waste containers (drums) into the carousels conventional mechanical handling equipment, such as a crane, or forklift can be used. Two different carousel types are approved for use with the standard 227 & 500 litre drums, a combination of crane and dedicated alignment /turning frame is required to load the carousels into the package. Finally a leak test must be carried out and AEA Technology is able to provide a suitably equipped and qualified technician for this task.



Figure 2. Loading a carousel into the Transactive-20 Package

Container Fleet

Waste Management Technology has one Transactive-20 Package, and five carousels suitable for the 227 litre drums in their fleet of Transport Packaging.

Packaging Ident	Dimensions (metres)	Cavity (metres)	Weight of package (tonne)	Payload weight (tonne)
	(H x L x W)	(L x Dia)		
DN3700	2.72 x 6.2 x 2.45	5.5 x 1.9	25.6	6.5
Carousel	1.00 x Dia 1.88 (approx)	~	510kg	786 kg

Figure 3 Packaging Specifications

A Certificate of Approval (CoA) and Operating Handling Instruction (OHI) and further information can be obtained from:

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