

ROSATOM
STATE ATOMIC ENERGY CORPORATION

CERTIFICATE OF APPROVAL

Registry number 19

dd. February 14, 2021.

FOR DESIGN AND TRANSPORTATION

**Transportation packing sets YKTMIА-30.3-PT-5
with radioactive materials**

RUS/6527/A-96T

Issued on	14.02.2022
Period of validity	14.02.2027

**Deputy General Director for State Security Policy
in the Use of Atomic Energy for Defense Purposes**

/signature/ **J.V. Yakovlev**

/Seal: Rosatom State Atomic Energy Corporation

**PSRN 107799032926 *5*/*

No. 001118

Approval record sheet

APPROVED

Deputy Head of Federal Service
for Ecological, Technological
and Nuclear Supervision

*/Seal: Federal Service for Ecological, Technological
and Nuclear Supervision * PSRN 1047796607650 */*

/signature/ A.V. Ferapontov
07.02.2022

CERTIFICATE OF APPROVAL

FOR DESIGN AND TRANSPORTATION

**Transportation packing sets YKTMIA-30.3-PT-5
with radioactive materials**

RUS/6527/A-96T

Valid till 14.02.2027

Acting Head of Department for Safety
Regulation of Nuclear Fuel Cycle Facilities,
Nuclear Power Plants of Ships and Radiation
Hazardous Sites of Federal Service for
Environmental, Technological, and Nuclear
Oversight

/signature/ T.J. Bogdanova
31.01.2022

Director of Special-Purpose
Transportation and Emergency
Preparedness – Director of Department
of Nuclear and Radiation Safety,
Organization of Licensing and Permit
Activities of Rosatom State Atomic
Energy Corporation

/signature/ S.V. Raykov
12.01.2022

Applicant – RITVERC Joint Stock Company (RITVERC JSC).

Postal address of the Applicant: 194223, St. Petersburg, Kurchatova st., 10, bld. K, room 2

Consignor and carrier of packages by road is RITVERC JSC.

Certificate of approval for RITVERC JSC.

This certificate of approval confirms the conformity of design of packages including transportation packing sets YKTMIA-30.3-PT-5 according to Section 2, with radioactive contents according to Section 3 and transportation conditions of these packages to the requirements of Safety Rules for Transportation of Radioactive Substances (NP-053-16) and Safety Code for Transportation of Radioactive Substances (2012 Edition (SSR-6), IAEA, 2013).

In accordance with NP-053-16, YKTMIA-30.3-PT-5 with radioactive content refers to Type A packages.

Designation of transportation packing sets YKTMIA-30.3-PT-5

Identification mark of packages: RUS/6527/A-96.

The package has the following UN number and shipping name: 2915, RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non-fissile or fissile excepted.

Max. transport index: 10.

Max. package category: III – YELLOW.

Transport index and package category are determined by the consignor before transportation in accordance with clause 5.3.1 and clause 5.3.7 of Safety Code for Transportation of Radioactive Substances (NP-053-16), are indicated in the accompanying documents and on the label.

1. Main Purpose

YKTMIA-30.3-PT-5 is one of the modifications of YKTMIA-PT container series and is designed for transportation and temporary (transit) storage of sealed radioactive sources (SRS), radioactive materials (RM) in solid and liquid state.

2. Structure of YKTMIA-30.3-PT-5

YKTMIA-30.3-PT-5 consists of protective container and shielding container.

The shielding container is a plastic container (Fig. 1) manufactured in accordance with TU 2297-004-14275025-2010, which is locked using standard locks. There are handles for lifting and moving the package on the sides of the shielding container.

The protective container (Fig. 2) consists of a body and a lid made of WNiCu class 3 alloy (or of Russian analogs BHM3-2, BHЖ3-2). Tungsten is used as a means of biological defense. The defense is 30 mm thick. The protective container is locked with bayonet connection between the lid and the body. Locking screw prevents spontaneous opening. There is a sealing gasket made of oil-petrol-resistant rubber of x-shaped section between the lid and the body, which ensures tightness of the container. There is a handle for lifting and moving of the protective container on its cover.

Special centering inserts are used to prevent displacement of the protective container inside the shielding container. Centering inserts are made of laminated EC grade sheet plastics corresponding to GOST 25500 or other material similar in physical and mechanical properties. Hot-rolled steel corners corresponding to GOST 8509 and blind rivets with closed end corresponding to GOST R ISO 15973 are used to fasten upper and lower inserts.

Dimensions of YKTMIA-30.3-PT-5 in mm:

- length – 384;
- width – 384;
- height – 435.

Max. weight of YKTMIA-30.3-PT-5 with RM, kg – 22.

Dimensions of the protective container in mm:

- diameter – 92;
- height – 131.4.

Max. weight of the protective container with RM, kg – 14.5.

Designated useful life of YKTMIA-30.3-PT-5 – 10 years.

3. Radioactive Contents

It is permitted to use YKTMIA-30.3-RT-5 for transportation and temporary (transit) storage of SRS, RM in solid and liquid state. The list of radionuclides and limit values of activity are given in Table 1.

When transporting radioactive contents, glass ampoules or vials with a volume of 20 ml (diameter 30 mm, height 55 mm) are used as primary packaging. The vials are sealed with a rubber stopper fixed in the neck of the vial with an aluminum cap. The cap is pressed over the rubber stopper on the neck of the vial. Glass ampoules are sealed by sealing the neck.

Table 1 – List of radionuclides transported in YKTMIA-30.3-PT-5 and their limiting activity

Radionuclide	Limiting activity, GBq
Fluorine-18	185
Cobalt-60	1.85
Strontium-90	300
Caesium-137	45
Lutecium-177	700

4. Nuclear Safety

There are no nuclear safety requirements.

5. Radiation Safety

5.1. Radiation safety is ensured in accordance with the requirements of NP-053-16 rules.

5.2. YKTMIA-30.3-PT-5 with radioactive content belongs to the package category III – YELLOW (max. transport index – 10), maximum radiation level of the package at maximum load with radioactive content, mSv/h (mRem/h):

- at any point on the outer surface – 2.0 (200);
- at a distance of 1 m from the outer surface – 0.1 (10).

6. Means of Transportation and Operating Conditions

6.1. Transportation of YKTMIA-30.3-PT-5 with radioactive contents can be carried out by all means of transportation, subject to safety rules during transportation of dangerous goods of class 7 in accordance with GOST 19433-88 for each type of transport, requirements of Rules NP-053-16 and if the carrier has appropriate license from Federal Environmental, Industrial and Nuclear Supervision Service of Russia.

6.2. Total number of packages placed on the vehicle shall be such that the transport index does not exceed 50. Radiation level shall not exceed 2.0 mSv/h (200 mRem/h) on external surface of the vehicle and 0.1 mSv/h (10 mRem/h) at a distance of 2 m from this surface.

Control of number of packages on the vehicle (aircraft, ship) shall be carried out by the respective carriers.

6.3. The use of YKTMIA-30.3-PT-5 shall be carried out in accordance with requirements of Transportation Packing Set Certificate and Operating Instructions. YKTMIA-30.3-PT-5, RITVERC JSC, 2021.

7. Emergency Conditions

In the event of an emergency during transportation of YKTMIA-30.3-PT-5 with radioactive contents, the following unit shall be promptly informed:

- supervisor of Operational Branch Dispatching Room of Atomspectrans JSC (24/7), tel. 8 (499) 262-31-08, 8 (495) 657-86-07;

- PI SCC of Rosatom, tel. 8 (495) 933-60-44, fax – 8 (495) 933-60-45, 8 (499) 949-24-35;

- supervisor of ETC of Rosatom JSC (24-7), tel. 8 (812) 702-19-00, fax – 8 (812) 591-53-33;

- duty officer of Federal Environmental, Industrial and Nuclear Supervision Service of Russia 8 (495) 532-15-08, fax – 8 (495) 532-15-10,

as well as be guided by emergency card No. 701, requirements of section 7 of NP-053-16 and requirements of Rules for Investigation and Tracking of Violations in Operation and Decommissioning of Radiation Sources, Radioactive Substances and Radioactive Waste Storage Facilities and Management of Radioactive Substances and Radioactive Wastes (NP-014-16), Plan for organization of work on elimination of consequences of accidents during transportation of cargo of radioactive materials, RITVERC JSC, 2019.

8. Quality Assurance

8.1. Quality during transportation of YKTMIA-30.3-PT-5 with radioactive contents is ensured in accordance with Quality Assurance Program for Transportation of Radioactive Materials (POK-T, Reg. No. RB-142), RITVERC JSC, 2020.

8.2. Quality Assurance Program for Transportation of Radioactive Materials (POK-T, Reg. No. RB-142), RITVERC JSC conforms with the requirements of regulatory document NP-090-11.

8.3. Control of technical condition of YKTMIA-30.3-PT-5, routine maintenance and elimination of defects arising during the use of packages are carried out in accordance with requirements of Transportation Packing Set Certificate and Operating Instructions. YKTMIA-30.3-PT-5, RITVERC JSC, 2021.

9. Governing and Guideline Documents

9.1. Safety Rules for Transportation of Radioactive Substances, NP-053-16, Federal Environmental, Industrial and Nuclear Supervision Service of Russia, 2016.

9.2. Safety Code for Transportation of Radioactive Substances (2012 Edition (SSR-6), IAEA, 2013), 2012.

9.3. Radiation Safety Standards (NRB-99/2009), Sanitation Rules and Standards (SanPiN) 2.6.1.2523-09, 2009.

9.4. Principal Sanitary Radiation Safety Rules (OSPORB-99/2010), Sanitation Rules SP 2.6.1.2612-10, 2010.

9.5. Rules of Investigation and Recording of Violations During Operation and Decommissioning of Radiation Sources, Storage Facilities for Radioactive Substances and Radioactive Waste and Management of Radioactive Substances and Radioactive Waste (NP-014-16). Federal Environmental, Industrial and Nuclear Supervision Service of Russia, 2016.

9.6. Requirements for quality assurance programs for nuclear facilities NP-090-11). Federal Environmental, Industrial and Nuclear Supervision Service of Russia, 2012.

9.7. Emergency card No. 701. Rosatom State Atomic Energy Corporation, 2011.

10. Documentation on the Basis of Which the Certificate of Approval is Issued

10.1. Application of ETC of Rosatom JSC for issuance of certificate of approval RUS/6527/A-96T dated 16.12.2021, ref. No. 218-01/21-2397 (by power of attorney of RITVERC JSC dated 11.08.2021, ref. No. 433).

10.2. Expert report AE 2035, ETC of Rosatom JSC, 2021.

10.3. Plan for organization of work to eliminate consequences of accidents during transportation of a cargo with radioactive materials, RITVERC JSC, 2019.

11. General Conditions

11.1. Information about revisions of certificate of approval.

This certificate of approval is issued for the first time.

11.2. For all questions related to this certificate of approval, please contact:

- Department of Nuclear and Radiation Safety, Arrangement of Licensing and Permit Activities of Rosatom State Atomic Energy Corporation: 119017, Moscow, B. Ordynka st., 24, tel.: 8 (499) 949-29-27, fax: 8 (499) 949-23-05;

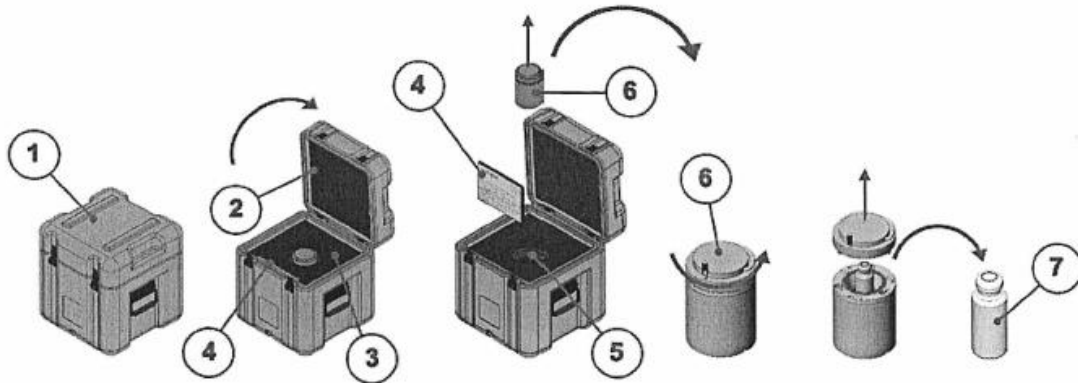
- Federal Environmental Industrial and Nuclear Supervision Service of Russia: 109147, Moscow, Taganskaya st., 34, tel.: 8 (495) 532-13-48, fax: 8 (495) 532-13-46;

- ETC of Rosatom JSC (194292, St.- Petersburg, Tretiy Verkhniy lane, 2, bld. A, tel./fax: 8 (812) 702-19-01 (main line), 8 (812) 591-52-30 (reserve line).

11.3. In accordance with this certificate of approval transportation can be carried out only if consignors, carriers, and consignees have appropriate licenses (permits) in the field of atomic energy use.

11.4. The certificate of approval is valid for YKTMIA-30.3-PT-5 with unexpired service life.

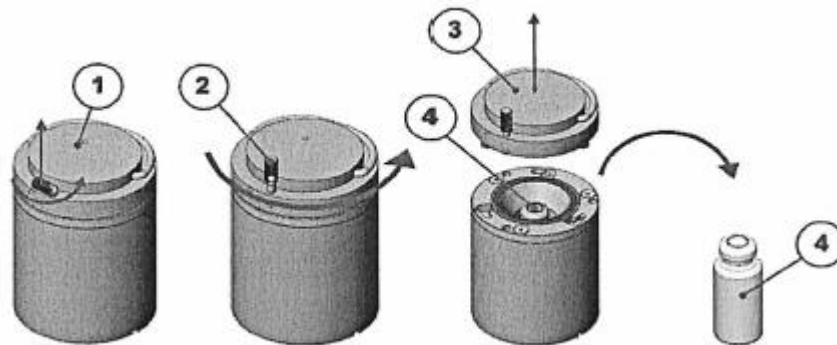
11.5. Official documents are the original and copies of this certificate of approval, certified in the prescribed manner.



1 – plastic container
2 – upper insert
3 – lower insert
4 – set of documents

5 – centering ring
6 – protective container
7 – preparation vial

Fig. 1 – YKTMIA-30.3-PT-5. General view.



1 – protective container
2 – locking screw

3 – lid
4 – preparation vial

Fig. 2 – Protective container. General view

Настоящий перевод с русского языка на английский язык выполнен ООО Центром переводов «Транс-Проект» (юридический адрес: 454008, РФ, г. Челябинск, Комсомольский пр., дом 2, оф. 512, тел. +7 (351) 790-50-65).

This document was translated from Russian into English by Trans-Project Translation Company LLC (legal address: 512, 2 Komsomolskiy Pr., Chelyabinsk City, Russia, 454008, tel.: +7 (351) 790-50-65).

Генеральный директор / Director General

Тарасов С.С. / Tarasov S.S.

21.02.2022

