



Ministry of Defence

Defence Standard

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**PETROLATUM, TECHNICAL
JOINT SERVICE DESIGNATION: PX-6**

**PETROLATUM, TECHNICAL
NATO CODE No: S-743
JOINT SERVICE DESIGNATION: PX-7**

AMENDMENT RECORD

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DEF STAN 91-38/1

PETROLATUM, TECHNICAL

Joint Service Designation: PX-6

PETROLATUM, TECHNICAL

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<p>This Defence Standard supersedes Specification DEF-2333 dated 24th July 1959</p>

1. This Defence Standard specifies the requirements for two grades of petrolatum technical, PX-6 and PX-7 for Ministry of Defence use.
2. This Standard has been prepared because there is no suitable national or any other standard acceptable to the Ministry of Defence available.
3. This Standard contains all necessary technical information and it is the definitive specification for these materials. It must be invoked for all tender and contract purposes.
4. PX-7 material approved to this Standard is authorised for use, where specified, in Service aerospace applications.
5. Approval refers only to technical suitability and in no way absolves either the supplier or the user from statutory obligations relating to health and safety at any stage of manufacture, handling or use.
6. This Standard has been agreed by all authorities concerned who are to implement it from its date of issue.
7. If this Standard should be found unsuitable for a particular requirement, the Director of Standardization shall be informed of the circumstances. Any enquiries regarding this Standard in relation to an invitation to tender, or a contract in which it is invoked should be addressed to the Quality Assurance Authority named in that invitation to tender or contract.

SPECIFICATION FOR
PETROLATUM, TECHNICAL
Joint Service Designation : PX-6
AND
PETROLATUM, TECHNICAL
NATO Code No: S-743
Joint Service Designation : PX-7

1. SCOPE

This Standard relates to two grades of petrolatum, technical for use as soft film corrosion preventive components. They are applied by brushing or smearing.

Note: The term Petrolatum as used in this Standard, shall be taken to mean a material conforming to the definition given in DEF STAN 01-5/ -HMSO viz:

Petrolatum, mineral jelly or petroleum jelly. A salve-like mixture of oil and microcrystalline wax obtained from petroleum

2. RELATED DOCUMENTS

a. Reference is made in this Standard to:

BS	'British Standard' (British Standards Institution)
IP	'IP standards for petroleum and its products' (Institute of Petroleum)
ASTM	'Annual book of ASTM standards' (American Society for Testing and Materials)

b. The related documents listed above are those applicable at the date of publication of this Standard. Their current applicability must be confirmed by all users of the Standard. The Quality Assurance Authority will supply on request, information concerning any changes that may be necessary due to the cancellation, replacement, supersession or amendment of any related document.

Note: Any enquiries regarding this Standard shall be referred to the Quality Assurance Authority shown in the tender or contract.

3. MATERIALS

a. The petrolatum, technical, PX-6, shall be a material conforming to the definition in clause 1, having a texture known commercially as "long-pull" and otherwise meeting the requirements of this Standard.

b. The petrolatum, technical vaseline, PX-7, shall be a material conforming to the definition in clause 1 and otherwise meeting the requirements of this Standard.

4. TESTING

Note: The units quoted in this Standard are consistent with the practice applied at present in the petroleum industry.

a. Test Methods.

Unless otherwise stated, the test methods to be used shall be the latest published editions of those given in this Standard.

b. Tolerance of test methods.

Requirements contained herein are absolute and not subject to correction for tolerance of test methods. If multiple determinations are made by the Inspecting Laboratory, average results are to be used except for those test methods where repeatability data are given. In those cases, the average value derived from the individual results that agree within the repeatability limits given for the test method, may be used if the Authority permits.

c. Additional test requirements.

The Ministry of Defence reserves the right to require additional testing of the product.

d. Requirements

A sample taken from any portion of the product shall comply with the following:

TEST NO	TEST	LIMITS		METHODS
		PX-6	PX-7	
1	Appearance	A uniform paste free from separated oil and visible impurities		Visual examination
2	Penetration, unworked	90-140	-	ASTM D937/IP179 (BS 4698)
3	Penetration, worked	-	230-275	ASTM D217/IP50
4	Viscosity, kinematic: cSt (mm ² /s) at 100°C	17-25	-	ASTM D445/IP71 (BS 4708)
5	Drop melting point °C min.	64	40	ASTM D127/IP133
6	Acidity, mg KOH/g:			
	Total max.	0.1	0.1	-/IP1 (BS 4705)
	Inorganic max.	Nil	Nil	-/IP182 (BS 4389)

4. d. (contd)

TEST NO	TEST	LIMITS		METHODS
		PX-6	PX-7	
7	Flash point °C min.	235	205	ASTM D93/IP34 (BS 2839)
8	Ash, per cent max.	0.03	0.03	ASTM D482/IP4 (BS 4450)
9	Saponification number max.	1.0	1.0	ASTM D94/IP136 (BS 4709)
10	Volatile matter per cent max.	0.2	0.2	Annex

5. QUALITY ASSURANCE

a. Representative samples of each batch of the product shall be tested to prove homogeneity and compliance with all the requirements of clause 4d of this Standard.

b. The Quality Assurance Authority reserves the right to sample and test the product at any time during procurement.

c. If any sample taken from a consignment is found not to comply with the requirements of this Standard, the whole consignment may be rejected.

d. The provisions of this clause apply equally to the contractor and any sub-contractor.

6. KEEPING QUALITIES

The product, when suitably stored in its original sealed containers, shall retain the properties described in this Standard for a period, from the date of despatch, of not less than twelve months in temperate climates, and not less than six months in tropical climates.

7. CONTAINERS AND MARKING OF CONTAINERS

a. The product shall be supplied in sound, clean, and dry containers, suitable for the product and in accordance with the requirements of the contract or order.

b. Coatings, paints, and markings of the containers shall comply with the requirements of the contract or order, and shall be to the satisfaction of the Quality Assurance Authority.

c. It shall be the responsibility of the contractor to comply with any legal requirements for the marking of containers.

ANNEX

METHOD FOR THE DETERMINATION OF VOLATILE MATTER

1. SCOPE

This method describes a procedure for determining the volatile matter content of petrolatum materials.

2. OUTLINE OF METHOD

A sample of the material is heated at 100°C for a period of six hours, and the percentage loss in weight is calculated.

3. APPARATUS

- a. Glass dish, flat bottomed, approx. 90 mm diameter.
- b. Air oven, controlled at $100 \pm 1^\circ\text{C}$.

4. PROCEDURE

- a. Dry the glass dish in the oven at $100 \pm 1^\circ\text{C}$, cool in a desiccator, and weigh to the nearest 1 mg.
- b. Into the dish put approx. 20 g of the product, and reweigh to the nearest 1 mg.
- c. Place the dish and contents in the oven and maintain at $100 \pm 1^\circ\text{C}$ for 6 hours.
- d. At the end of the test period, remove the dish and contents from the oven, cool in a desiccator and re-weigh to the nearest 1 mg.

5. CALCULATION AND REPORTING

Calculate the loss in weight, to the nearest 0.01 per cent of the original samples. Report this result as the volatile matter of the material.