

भारत सरकार
Government of India
रेल मंत्रालय
Ministry of Railways



Indian Standard-RDSO
Specification for Pneumatic Tool Oil

धातु एवं रसायन निदेशालय

Metallurgical & Chemical Directorate

अनुसंधान, अभिकल्प एवं मानक संगठन, मानक नगर, लखनऊ - 226011

Research Design & Standards Organisation

Manak Nagar, Lucknow – 226011

Specification for Pneumatic tool oils

1. SCOPE:

This specification prescribes the requirements and methods of tests for Pneumatic tool oils for the use of Pneumatic equipment such as rock-drill, jack hammers, chippers, wagon drills and also used in small plant pneumatic tools like grinders, filing tools, drills, tappers, impact wrenches etc.

2. REQUIREMENTS:

2.1 COMPOSITION:

The material shall be of such a composition as to satisfy the requirements of the standard. The material shall be made from refined mineral oils and shall be bright, clear and free from water, dirt and other suspended impurities. It should have anti-wear tackiness and extreme pressure properties and form a tenacious oil film on mixing with condensed moisture. It should also have excellent load carrying ability and rust preventive properties.

2.2 The material shall also comply with the requirements given in Table-I.

TABLE – I

REQUIREMENTS FOR PNEUMATIC TOOL OILS

Sl. No.	Characteristics	Requirements		Method of Test
		Gr. VG-100	Gr. VG-220	
1.	Kinematic Viscosity at 40°C, cSt	90-110	198-242	IS:1448 P:25
2.	Flash Point Cleveland Open Cup, °C, (min.)	170	200	IS:1448 P:69
3.	Pour Point °C (max.)	-3	-3	IS:1448 P:10 Sec:2
4.	Ash % by mass (max.)	0.01	0.01	IS:1448 P:4
5.	ASTM colour (max)	6.5	8.0	IS:1448 P:12
6.	Total acidity, mg of KOH/g (max.)	0.15	0.20	IP:1
7.	Inorganic Acidity	-----NIL -----		IP:182
8.	Saponification Value (max)	-----1.0 -----		IS:1448 P:55 Sec:1
9.	Copper strip corrosion at 100°C, for 3 Hrs.	Not worse than No.1		IS:1448 P:15
10.	Four Ball Weld Load, kgf, (min.)	-----200-----		IP:239

3. PACKING & MARKING:

The material shall be packed in securely closed metal drums or any other suitable closed metal drums or any other suitable containers of appropriate size. Following shall be marked on the containers.

- a) Name, grade and net mass of the material
- b) Manufacturer's Name
- c) Date of Manufacturing

4. SAMPLING:

Representative samples of the material shall be drawn as prescribed in IS: 1447 (Part1).

5. TESTS:

Tests shall be conducted as prescribed in various parts of IS: 1448. References to the relevant parts/sections are given in column four of Table I.

6. QUALITY OF REAGENT:

Unless specified otherwise, pure chemical (A.R. i.e. Analytical Reagent) & distilled water shall be employed in the tests.

7. CRITERIA FOR CONFORMITY:

A lot shall be declared conforming to the requirements of this standard if the test results of the sample satisfy requirements prescribed in Table I.

- 8.** "Firm should comply Make in India policy and Public Procurement (Preference to Make in India) order-2017 for Pneumatic Tool Oil under this specification" and subsequent amendment done time to time.
