

Oil Resistant

STANDARDS



OIL RESISTANT TEST – AATCC TEST METHOD (118 – 1997)

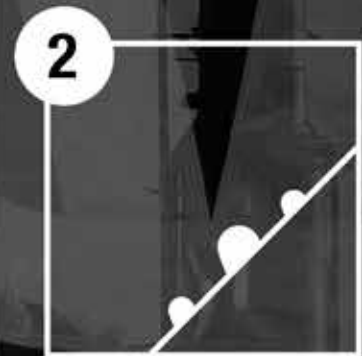
HYDROCARBON RESISTANCE TEST

Purpose: To evaluate fabrics resistance to wetting by selecting series of liquid hydrocarbons of different surface tensions. The test calculates the degree of penetration of the different drops, the value of which goes from 1 to 8. Leather passes the test when the drop corresponding to oil number 3 (or more) remains perfectly on the surface. In practice, the test simulates accidental pouring of oil-based liquids commonly used in everyday life.

STEPS



- Drops of standard test liquids are placed on fabric surface
 - Begin with lowest numbered test liquid
 - Carefully place small drops approx. 5 mm in diameter in 5 locations (drops 4 cm apart). Do not touch the fabric with the dropper



- Drops are observed, wetting, wicking and contact angle
- Observe drops at 45° angle for 30 seconds
- If no penetration or wetting of fabric is seen for more than 3 out of 5 drops then place drop of next liquid

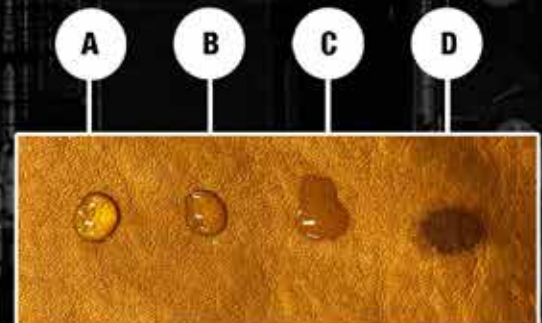
3

- Continue the procedure until one of the test liquids show obvious wetting or wicking of fabric in 30 seconds. Once one shows signs of wetting the oil repellency grade number is the previous chemical (E.g. if n-heptane drops showed signs of wetting the grade of that fabric would be 7)

STANDARD TEST LIQUIDS & GRADES

There are eight grades used in the oil repellency test

AATCC OIL REPELLENCY GRADE #	COMPOSITION
0	None (if kaydol fails)
1	kaydol
2	65:35 kaydol: n-hexadecane by volume
3	n-hexadecane
4	n-tetradecane
5	n-dodecane
6	n-decane
7	n-octane
8	n-heptane



- A – Passes; clear well-rounded drop
- B – Borderline pass; rounding drop with partial darkening
- C – Fails; wicking apparent and/ or complete wetting
- D – Fails; complete wetting

* testing is done in laboratory conditions