



Acidity tests for mineral, alkylbenzene, polyvinylether and polyol-ester refrigerating oils

DTGB - 91.1-2-4-11

→ TESTOIL-MAS / TESTOIL-POE / TESTOIL-MP ^{04/11}



The oil acidity content is an important parameter to check because it determines the refrigerating installation's good operating condition.

Two internal chemical processes can alter the oil quality and generate the formation of acids and sludge harmful for the installation:

- > the formation of free fluorinated and chlorinated acids produced by alteration of halogen refrigerants;
- > the formation of fatty acids by hydrolysis of POE-type oils.

These acids then generate metallic salts and oxides (iron or copper) that could block the oil filter or lead to the copper plating of metallic parts in motion. These degradation phenomena are dangerous for the installation, because they lead to seizing of oil pumps and to severe damage due to lubrication defect.

The new oils (mineral, alkylbenzenes, polyvinylether and polyol-esters) have different acidity indices due to the addition of (anti-wear, antioxidant, anticorrosive...) additives by the manufacturer, in order to reduce mechanical wear and extend the compressor's service life.

■ Applications

- TESTOILs ensure monitoring of the additive mineral, alkylbenzene and polyol-ester oil acidity in refrigerating and air conditioning installations.

■ Functional features

- TESTOILs are solvent-based flammable chemical solutions, coming from natural products (they do not contain benzene, or xylene, or toluene).
- TESTOIL-MAS is compatible with no additive mineral, alkylbenzene and polyvinylether oils
- TESTOIL-POE is compatible with additive polyol-ester oils.
- Level of VOC (Volatil Organic Compounds): 98% - 16.9 grams / product.

■ CARLY advantages

- TESTOILs are ready for use products, usable on site.
- The measurement process is simple, quick and efficient.



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■ Directions for use

- TESTOIL bottles should be opened only for immediate use.
- Pour an oil sample in the bottle.
- Shake and let it rest for 10 seconds until colour stabilisation.
- Observe the test solution colour:
 - Purple: test is satisfactory, oil acidity is correct;
 - Yellow: oil acidity is high, oil should be replaced.

■ Precautions for use

- * The test solution colour changes with highly additive oils (TAN > 0.30) but this does not mean that they are faulty: it is therefore very important to inquire about the additive contents of the oil used, for a correct interpretation of the result obtained when the acidity test is performed using TESTOIL.
- * To ensure reliable measurement, shorten the handling time between the oil sampling from the compressor and the opening of the TESTOIL bottle.
- * Do not smoke.
- * Do not swallow.
- * Avoid excessive contact with skin.
- * In case of contact with eyes, rinse copiously with water.
- * If irritation persists, see a physician.
- * It is recommended wearing gloves and glasses when using the product.
- * R11 Easily flammable.
- * R21/22 Harmful in contact with skin and if swallowed.
- * S2 Keep away from childrens.
- * S16 Keep away from all flames or sources of sparks or ignition.- Do not smoke.
- * S23 Do not inhale the vapors.
- * The product is solvent-based and should be kept in a cool and dry place.
- * Do not expose the product to sun-light.
- * Do not use TESTOIL in a circuit containing a tracer (the tracer distorts the test's interpretation).
- * **Storage conditions:** Keep the product at temperatures between +5°C and +30°C, in a dry and cool place, and protect from sunlight.
- * **Reprocessing:** the product should be disposed of in accordance with the legislation in force.

■ Technical features

CARLY references	Acid test for additive oils	Packaging
TESTOIL-MAS	mineral, alkylbenzene and polyvinylether	1 bottle of 30 ml
TESTOIL-POE	polyol-ester	1 bottle of 30 ml
TESTOIL-MP	mineral, alkylbenzene, polyvinylether and polyol-ester	2 bottles of 30 ml

■ Weights and packaging

CARLY references	Unit weight (kg)	Packaging unit
TESTOIL-MAS	0,07	18
TESTOIL-POE	0,07	18
TESTOIL-MP	0,14	16