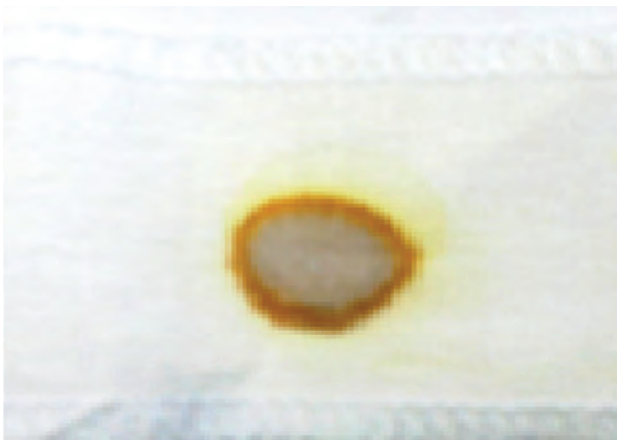
DINITROGEN TETROXIDE LEAK INDICATOR

Areas of Application

The indicator is designed for visual detection of dinitrogen tetroxide (amyl) leak as a result of through defects in detachable pipe connections of rocket fuel systems by a local change in color

Specification

The product is made in the form of ribbon with geometric parameters chosen depending on the dimensions of pipeline connections. The original color of indicator's surface is white. While contacting the places of dinitrogen tetroxide leaks the indicator changes its color to brown shades. The minimum dinitrogen tetroxide leak reliably detectable by the indicator during 5-minute test is about 10^{-7} $m^3 \cdot Pa/s$. The product can be used in the temperature range from +5 to +50 °C at a relative humidity of 98%. The product meets TS of Ukraine 20.5-05417213-002:2016



Appearance of dinitrogen tetroxide leak indicator before (upper) and after (lower) contact with the mentioned substance

Advantages

As compared with the counterparts, the product is ten times more sensitive, reliably detects not only dinitrogen tetroxide, but also the products of its chemical transformations: nitrogen dioxide, nitric and nitrous acids. Suitable for the use in tropical conditions

IPR Protection

IPR3

Stage of Development. Suggestions for Commercialization

IRL8, TRL9
Manufacture, supply, and staff training, upon request

Contact Information

Sergii O. Soloviev, L.V. Pisarzhevskii Institute of Physical Chemistry of the NAS of Ukraine;
+38 044 525 66 70, e-mail: soloviev@inphyschem-nas.kiev.ua