

Shelf life of performance fluids

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ExxonMobil™ solvents are manufactured within very narrow specification limits. Great care is taken to maintain quality consistency and to remove components that promote deterioration in storage. However, all organic solvents are susceptible to a slow oxidative breakdown that may be accelerated by impurities such as inorganic salts from sea water, polar compounds, and iron salts from rusty tanks. Elevated temperature conditions, extended exposure to light, and frequent tank breathing can also have a negative impact on product quality.

The properties of the product should be compared against the product specifications and the original quality report.

If the product shows little or no signs of deterioration and complies with specifications, the shelf life may be extended a further 50% of recommended test interval. If the product has deteriorated, it should be tested in the specific application or formulation to ensure it still meets the required performance levels.

Great care is taken with ExxonMobil solvents to ensure the absence of components promoting deterioration during storage. As a result, the shelf life of these solvents can be easily twice the length of time recommended for periodic testing. However, since the conditions of storage are outside of our control, test intervals have been set to detect contamination and early signs of degradation.

It is therefore recommended that ExxonMobil solvents are stored under cover in the dark and in the absence of any impurities. It is recommended that the solvents are checked for deterioration at the following intervals:

Aromatic containing grades: 6 months

Aromatic, Solvesso™, Varsol™, Exx-Print™ A

Low aromatic hydrocarbon grades: 12 months

Isopar™, Exxsol™, Escaid™, Exx-Print™ D, Somentor™

Considerations for hydrocarbon fluids

The first signs of product deterioration are usually a discoloration (generally yellowish) and the development of a non-characteristic odor. Changes in other properties such as haziness, sulfur and aromatic content may not be due to degradation but to contamination of the product by other substances. Haziness is usually associated with dispersed free water.

Oxygenated fluids:

ExxonMobil™ IPA:	12 Months
ExxonMobil™ SBA:	12 Months
ExxonMobil™ MEK:	6 Months
ExxonMobil™ DIPE:	6 Months

Considerations for oxygenated fluids

ExxonMobil™ MEK (methyl ethyl ketone) can last for 12 months; however, due to its tight water specification and hygroscopic nature, there are regions where storage and climatological conditions shorten shelf life to 6 months. There is also a small risk of discoloration of MEK. ExxonMobil™ IPA (Isopropyl alcohol) can also form deposited peroxides under very specific conditions

ExxonMobil™ DIPE (Di-isopropyl ether, or also isopropyl ether) requires specific attention to handling requirements due to the hazards associated with this material: high vapor pressure, low flash point, and peroxide formation. Due to the risk of peroxide formation, the material should be inhibited (with BHT [Butylated hydroxytoluene] and maintained at a concentration of 50–100 mg inhibitor/kg DIPE) to prevent further peroxide formation and the inhibitor and peroxide levels must be closely monitored to ensure safe handling. Unchecked peroxide formation can lead to deposition of solid peroxide material (colorless crystals) which is extremely dangerous as it is shock sensitive and can explode. Contact your ExxonMobil representative for additional information. With proper handling ExxonMobil DIPE can be maintained up to 6 months, but monitoring is required at 3 month intervals.

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