

Exxsol™ D Isopar™

**ExxonMobil**

# A clean shift from chlorinated solvents

Energy lives here™



### Key advantages

- Efficient cleaning
- Improved worker protection and comfort
- Lower operating costs
- Globally available



### Put science on your side

Cleaning with Exxsol™ D or Isopar™ cleaning solvents has numerous benefits versus chlorinated solvents for both workers and the environment. In addition to having a strong odor, chlorinated solvents such as TCE (trichloroethylene) and PCE (perchloroethylene) carry various adverse health classifications requiring very low exposure limits for workers. Perchloroethylene is also classified as "toxic to aquatic life with long lasting effects" under GHS classification.

### Not all solvents are the same

Some solvents can adversely affect machined parts. Some may not dry the way you need them to. ExxonMobil offers a range of lower-toxicity premium solvents specifically suited for the cleaning of machined parts. In addition to meeting your performance expectations, these cleaning solvents offer the potential to improve your manufacturing processes, enhance the quality of the goods you produce and their perceived value to your customers.



## Exxsol™ D solvents

Purified by a hydrogenation process, Exxsol D hydrocarbon cleaning solvents effectively dissolve and remove cutting fluids, greases, protective oils and similar contaminants. They can also remove waxes and surfactants under mechanical agitation such as brushing, wiping or ultrasound.


**Rely on Exxsol D40, Exxsol D60 and Exxsol D80 solvents for easy tailoring to your cleaning conditions and your preferred balance of drying time, evaporation rate and safe operating conditions.**

### Features

- Low odor, with an aromatic content typically less than 0.5%
- High degree of quality consistency with predictable solvent performance
- Not classified as toxic under GHS classification
- Dramatically lower risk exposure than chlorinated solvents (for example, at least 70 times lower than PCE for Exxsol D40)
- Globally available

### Benefits

- Improved worker protection and comfort
  - Significantly higher occupational exposure limits
  - Lower risk of overexposure to vapor
  - Improved working environment
- Lower operating costs
  - Lower solvent consumption
  - Potential for reduced compliance costs
- Efficient cleaning without damaging parts, including most plastics and elastomers

Performance	ExxonMobil Solvents									Traditional Solvents	
	Exxsol D40			Exxsol D60			Exxsol D80			PCE <sup>1</sup>	TCE <sup>2</sup>
<b>GHS Carcinogenic, Mutagenic, Reproductive Toxicity classification</b>	None			None			None			H351 : Suspected of causing cancer	H350: May cause cancer H341: Suspected of causing genetic defects
<b>Occupational Exposure Limit (mg/m<sup>3</sup>)</b>	1200			1200			1200			169	54
<b>Flash Point °C (typical)</b> Asia   Americas   Europe	48	44	41	65	64	65	81	83	78	Not applicable	Not applicable
<b>Boiling Range °C (typical)</b> Asia   Americas   Europe	167	161	155	186	190	185	206	207	204	121	86
	191	199	192	213	211	215	238	237	238		
<b>GHS Labeling for Environmental Hazards</b>	None			None			None				None

All comparisons of product performance and safety data are to chlorinated solvents unless otherwise stated.  
OEL listed is ACGIH recommended TWA for PCE and TCE.  
Source for OELs of Exxsol D solvents: RCP - TWA - ExxonMobil data.

The replacement of non-flammable solvents with a hydrocarbon fluid requires appropriate equipment & assessment.

<sup>1</sup> PCE (perchloroethylene)

<sup>2</sup> TCE (trichloroethylene).

Test methods available on request.

## Isopar™ solvents

These high-purity synthetic isoparaffinic solvents are preferred for industrial cleaning in a low odor, safer working environment. Virtually odorless, these cleaning solvents make your workplace more pleasant for employees. In addition to effectively dissolving and removing cutting fluids, greases, protective oils and similar contaminants, Isopar solvents can also remove waxes and surfactants with mechanical agitation such as brushing, wiping or ultrasound.


**Choose Isopar solvents for your toughest cleaning challenges, including parts with complex geometry that may be difficult to clean and dry. The low surface tension of Isopar G, Isopar H and Isopar L solvents ensures that it gets to areas that other solvents cannot reach. Dirt is flushed away more effectively, and the drying process is faster. These advanced cleaning solvents are especially suitable for repeated use, supported by filtration or redistillation processes.**

### Features

- Excellent product consistency
- Compatible with most plastics and elastomers
- High chemical and thermal stability
- Narrow distillation range, for optimal compromise between high flash point and drying time
- Virtually odorless, with an aromatic content less than 0.01%
- Dramatically lower risk exposure than chlorinated solvents (for example, at least 260 times lower than PCE for Isopar L)
- Globally available

### Benefits

- Improved worker protection and comfort
  - Significantly higher occupational exposure limits and lower risk of overexposure to vapor
  - Improved working environment
- Lower operating costs
  - Lower solvent consumption
  - Can be repeatedly reused
  - Less stringent ventilation requirements than with chlorinated solvents
- Efficient cleaning without damaging parts
- Optimum control of your cleaning process

Performance	ExxonMobil Solvents			Traditional Solvents	
	Isopar L			PCE <sup>1</sup>	TCE <sup>2</sup>
GHS Carcinogenic, Mutagenic, Reproductive classification	None			H351: Suspected of causing cancer	H350: May cause cancer H341: Suspected of causing genetic defects
Occupational Exposure Limit (mg/m <sup>3</sup> )	1200			169	54
Flash Point °C (typical) Asia Americas Europe	66	62	68	Not applicable	Not applicable
Boiling Range °C (typical) Asia Americas Europe	185 198	190 208	190 210	121	86
GHS Labeling for Environmental Hazards	None				None

All comparisons of product performance and safety data are to chlorinated solvents unless otherwise stated.

OEL listed is ACGIH recommended TWA for PCE and TCE.

Source for OELs of Isopar L solvents: RCP - TWA - ExxonMobil data.

The replacement of non-flammable solvents with a hydrocarbon fluid requires appropriate equipment & assessment.

<sup>1</sup> PCE (perchloroethylene)

<sup>2</sup> TCE (trichloroethylene).

Tests methods available on request.



Contact us for more information:

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F0815-869E49

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