

The suitable hose for your oil / fuel application

The effects of oils and fuels on rubber depend on many factors which must thoroughly be examined for the correct selection of material and hoses. To make the right choice for your application, our technical team has scanned our product portfolio of industrial hoses and has developed an **overview matrix of the oil and fuel suitability**. We can now provide you with a **transparent** and **clear directional indication** of which hose should be used for which application to facilitate your selection.

The results of our analysis are specifically tailored to the oils and fuels used in common markets and industries. The verification and validation is based on known technical standards, and provide you with a broad and well-structured summary. It serves as supporting tool for the selection of which medium is suitable for which hose and can therefore be used.

Based on the **matrix table on the next page**, the selection and probing is made easy as the different categories are marked in the **colors green (suitable), yellow (conditional) and white (not recommended/ not suitable)**.

Semperit Industrial offers a broad range of hoses for the listed applications and their respective norms and standards.



Josef Herold, Head of Product Management:

“Our suitability analysis is based on very intensive and complex testing procedure, performed with a large variety of calibrated media. The trials were defined within the most common and known standards in the oil/fuel industry and form a solid basis for the shown data and facts.”

Insight fuel

Biodiesel vs. Diesel

Biodiesel is a form of fuel that is equivalent to mineral diesel fuel in use. The chemical industry obtains biodiesel by converting vegetable oil, or soybean oil or animal fats with monohydric alcohols such as methanol or ethanol. Biodiesel can be sold pure (B100) or as an admixture (e.g. B7, B20).

Diesel mixtures have "B" numbers which describe the percentage of biodiesel in the mixture by volume. The most common type is B7, which contains up to 7% biodiesel and up to 30% aromatics. In Europe, the properties and ingredients of Diesel are regulated and specified within the EN 590.

Gasoline

Ethanol fuel mixtures have "E" numbers which describe the percentage of ethanol fuel in the mixture by volume, for example, E85 is 85% anhydrous ethanol and 15% gasoline. The most common used mixtures are E5 to E25, which contains up to 42% aromatics. In Europe the properties and ingredients of Gasoline / Benzin are regulated and specified within the EN 228.

Mineral Oil

Mineral oil is a collective name for the liquid distillation products obtained from mineral raw materials (mainly petroleum), which mainly consist of mixtures of hydrocarbons and are classified according to aromatic content.

Mineral oils or mineral oil products are the basis for a wide variety of products such as gasoline, diesel fuel, heating oils, lubricating oils, etc. Mineral oils also serve as a starting point, to produce for example cosmetics, pharmaceuticals, many different plastics, textiles, and dyes.

Fact: There is no universal hose for all various fuels!

Even if collective terms such as “petrol hose” or “fuel hose” are used frequently, there is no hose that can be used universally for all fuels. Each fuel has its own specific physical and chemical properties resulting in a huge number of special fuel types available in the market. For more information or any doubt regarding your application please contact our [technical team](#).

Application / Anwendung	Hose type / Schlauchtype	Standard	Mineral Oil - max. aromatics**				Diesel / Biodiesel			Gasoline / Benzin				Gas	
			30%	40%	50%	60%	B7 (EN590)	B20	Biodiesel (B100/RME)	E5 (EN 228)	E10	E85	E100	LPG	CNG
Vehicle Fuel <i>Treibstoffschlauch Fahrzeug</i>	FUB	SAE J30 R2/R6	S	S	S	S	S	S	S	S	S	S	X	X	
	FUB 386	SAE J30 R2/R6	S	S	S	S	S	S	S	S	S	S	X	X	
	FMO	see remark*	S	S	S	S	S	S	S	S	S	S	X	X	
	FMS	see remark*	S	S	S	S	S	S	S	S	S	S	X	X	
	FUE	see remark*	S	S	S	X	S	S	C	S	S	C	C	X	X
	FPB R67/R110	ECE R67/R110	X	X	X	X	X	X	X	X	X	X	X	X	X
	FPB	see remark ¹	X	X	X	X	X	X	X	X	X	X	X	X	X
Petrol Pump <i>Zapfstellenschlauch</i>	TEF 1360	EN 1360	S	S	S	S	S	S	S	S	S	S	X	X	
	TEU 1360	EN 1360	S	S	S	S	S	S	S	S	S	S	X	X	
	TMH	see remark*	S	S	S	S	S	S	C	S	S	S	X	X	
	TOF 319	see remark*	S	S	S	S	S	S	C	S	S	S	X	X	
Oil / Fuel Tank Truck <i>Tankfahrzeug/Förderung</i>	TM3-D	EN 1762	S	S	S	S	S	S	S	S	S	S	S ²	S ²	
	TM1	EN 1761 / EN 12115	S	S	S	S	S	S	S	S	S	S	X	X	
	TM2	EN 1761 / EN 12115	S	S	S	S	S	S	S	S	S	S	X	X	
	FLEXIOIL	EN 1761 / EN 12115	S	S	S	S	S	S	S	S	S	S	X	X	
	FLEXIOIL D	EN 1761 / EN 12115	S	S	S	S	S	S	S	S	S	S	X	X	
	TMSL corrugated	see remark*	S	S	S	S	S	S	S	S	S	S	X	X	
	TM 30 series	see remark*	S	S	S	X	S	S	C	C	C	C	X	X	
TM 50 series	see remark*	S	S	S	X	S	S	C	C	C	C	X	X		
Onshore for Oil / Fuel	TSF 16 / TSF 20	see remark*	S	S	S	S	S	S	S	S	S	S	X	X	
Multipurpose Mineral Oil Hoses for Industrial applications <i>Vielzweck Mineralölschlauch für Industrielle Anwendungen</i>	TU 10/20/25	see remark*	S	S	S	C	S	S	C	S	S	C	C	X	X
	TU 40	see remark*	S	S	S	C	S	S	C	C	C	C	C	X	X
	TUC 10/20	see remark*	S	S	C	X	S	S	X	X	X	X	X	X	
Oil Return	TMR4 series	SAE J517 100 R4	S	S	C	X	S	S	C	C	C	X	X	X	X
Oil Cooling	FKO	see remark*	S	S	C	C	S	S	S	X	X	X	X	X	X
Universal Multipurpose hose (Oil/Hot Water/Light Chemicals) <i>Universeller Vielzweckschlauch (Öl/Heißwasser/Leichte Chemikalien)</i>	Supreme	see remark*	S	S	C	C	S	S	X	X	X	X	X	X	X

(status: February 2022)

- * For hose types not assigned to a standard, the generally applicable ASTM references were used for assessment
- ** The maximum aromatic content validation is based on tests with reference fuel simulants with 30-60% aromatic content
 - 1) Transport of Propane-Butane gas for low pressure applications
 - 2) Suitable for Petrol Pump hose application as well

The suitability classification has been tested in our internal laboratory referring to mentioned standards and the parameters specified therein (such as temperature and test media). The results and categorization in the table above does not reflect the performance of the product in any specific application, but it enables to assign and select the right hose to the relevant medium used.

Matrix color scheme

- S:** **Suitable** for continuous service in full- and empty hose systems
- C:** **Conditional** → might have a limited suitability in real application; because of insufficient data in our hands, we advise to test the hose performance suitability under real conditions prior usage; in case of any questions please contact our [customer service team](#)
- X:** **Not recommended / not suitable** → the material properties might be affected and weakened during usage



Please note: The content of this publication is not legally binding and is provided as information only. Content subject to changes as mistakes, misprints and incorrect data are reserved and we disclaim liability for accuracy and completeness of the content. For further details please visit our [Disclaimer Semperflex Industrial Informs - Semperit Technische Produkte Gesellschaft m.b.H.](#)