

James Walker[®]

Fluolion[®]

Chemical Compatibility Guide


Issue One




Chemical Compatibility Guide

Fluolion® 200, 700, 800, 900 modified PTFE sheet gasket materials

The following information is issued as a guide only. All media are taken to be at ambient ('room') temperature other than molten alkali metals, which are at their respective melting points. Consulting a James Walker sales or technical representative is always recommended (see back cover for global contact details).

 Recommended

 Please consult James Walker

 Not recommended

Medium	Fluolion® 200	Fluolion® 700	Fluolion® 800	Fluolion® 900
STEAM (SATURATED TO 10 BAR)	Recommended	Recommended	Recommended	Recommended
STEAM CONDENSATE	Recommended	Recommended	Recommended	Recommended
WATER	Recommended	Recommended	Recommended	Recommended
AIR	Recommended	Recommended	Recommended	Recommended
ACETIC ACID	Recommended	Recommended	Recommended	Recommended
ACETONE	Recommended	Recommended	Recommended	Recommended
ACETYLENE	Recommended	Recommended	Recommended	Recommended
ADIPIC ACID	Recommended	Recommended	Recommended	Recommended
ALUMINIUM CHLORIDE	Recommended	Recommended	Recommended	Recommended
ALUMINIUM FLUORIDE	Recommended	Not recommended	Recommended	Not recommended
AMMONIA, (ANHYDROUS, DRY)	Recommended	Recommended	Recommended	Recommended
AMMONIA (WET)	Recommended	Recommended	Recommended	Recommended
AMMONIUM CHLORIDE	Recommended	Recommended	Recommended	Recommended
AMMONIUM HYDROXIDE	Recommended	Recommended	Recommended	Recommended
ANILINE	Recommended	Recommended	Recommended	Recommended
BENZENE	Recommended	Recommended	Recommended	Recommended
BIO-DIESEL (B100)	Recommended	Recommended	Recommended	Recommended
BITUMEN & HEAVY BOTTOMS	Recommended	Recommended	Recommended	Recommended
BLACK LIQUOR	Recommended	Consult	Recommended	Not recommended
BLEACH SOLUTIONS	Recommended	Recommended	Recommended	Recommended

Medium	Fluolion® 200	Fluolion® 700	Fluolion® 800	Fluolion® 900
BOILER FEED WATER				
BRINE				
BROMINE				
BROMINE TRIFLUORIDE	Not recommended	Not recommended	Not recommended	Not recommended
BUNKER FUEL				
BUTANE				
CALCIUM CHLORIDE				
CALCIUM HYDROXIDE				Consult
CALCIUM HYPOCHLORITE				
CARBON DIOXIDE				
CARBON DISULPHIDE				
CARBON TETRACHLORIDE				
CHLORINE (DRY)				
CHLORINE (WET)				
CHLORINE DIOXIDE				
CHLORINE TRIFLUORIDE	Not recommended	Not recommended	Not recommended	Not recommended
CHROME PLATING SOLUTIONS		Consult		Consult
CHROMIC ACID				
CREOSOTE				
DIESEL OIL				
DIETHYL ETHER				
DOWTHERM®				
ETHANE				
ETHANOLAMINES				
ETHER				
ETHYL ALCOHOL (ETHANOL)				
ETHYLAMINE				
ETHYLENE				
ETHYLENE GLYCOL				
ETHYLENE OXIDE		Consult	Consult	Consult
FERRIC CHLORIDE (WET)				
FLUORINE (GAS & LIQUID)	Not recommended	Not recommended	Not recommended	Not recommended
FLUORINE DIOXIDE	Not recommended	Not recommended	Not recommended	Not recommended

Medium	Fluolion® 200	Fluolion® 700	Fluolion® 800	Fluolion® 900
FORMALDEHYDE				
FORMIC ACID				
GASOLINE (PETROL)				
GREEN LIQUOR		Consult		Not recommended
HEAVY OILS				
HYDROBROMIC ACID				
HYDROCHLORIC ACID				
HYDROFLUORIC ACID		Not recommended	Consult	Not recommended
HYDROFLUROSILICIC ACID		Not recommended	Consult	Not recommended
HYDROGEN		Not recommended	Not recommended	
HYDROGEN CHLORIDE GAS (DRY)				
HYDROGEN FLUORIDE		Not recommended	Not recommended	Not recommended
HYDROGEN PEROXIDE (<30%)				
HYDROGEN SULPHIDE				
ISOPROPYL ALCOHOL				
JET FUELS (ALL TYPES)				
KEROSENE				
LINSEED OIL				
LIQUID PETROLEUM GAS (LPG)				
LYE (60%)		Consult		Not recommended
METHANE				
METHYL ALCOHOL (METHANOL)				
METHYL CHLORIDE				
METHYL ETHYL KETONE (BUTANONE)				
METHYL TERTIARY BUTYL ETHER (MTBE)				
METHYLATED SPIRITS				
METHYLENE CHLORIDE				
MINERAL OILS				
MOLTEN ALKALI METALS (LITHIUM, POTASSIUM, SODIUM, NaK)	Not recommended	Not recommended	Not recommended	Not recommended
NAPHTHA				
NATURAL GAS				
NITRIC ACID				

Medium	Fluolion® 200	Fluolion® 700	Fluolion® 800	Fluolion® 900
NITROGEN				
OCTANE				
OLEUM		Consult	Not recommended	
OXALIC ACID		Consult		
OXYGEN	Consult	Consult	Consult	Consult
OZONE	Consult	Consult	Consult	Consult
PERCHLOROETHYLENE				
PHENOLS				
PHOSPHORIC ACID, CRUDE		Not recommended	Consult	Not recommended
PHOSPHORIC ACID (50%)		Consult		Consult
POTASSIUM DICHROMATE (10%)				
POTASSIUM HYDROXIDE (<50%, CAUSTIC POTASH)		Consult		Consult
POTASSIUM HYDROXIDE (>50%, CAUSTIC POTASH)		Not recommended		Not recommended
PROPANE				
PYRIDINE				
RAPE SEED OIL				
REFRIGERANT R12 (eg FREON® 12)				
R22 (eg FREON® 22)				
R134a (eg KLEA® 134a)				
R404a (eg KLEA® 404a)				
R407 SERIES (eg KLEA® 407 SERIES)				
SEA WATER				
SODIUM CARBONATE				
SODIUM CYANIDE		Not recommended		Not recommended
SODIUM DICHROMATE				
SODIUM HYDROXIDE (<50%, CAUSTIC SODA)		Consult		Consult
SODIUM HYDROXIDE (>50%, CAUSTIC SODA)		Not recommended		Not recommended
SODIUM HYPOCHLORITE				
STARCH				
STYRENE				
SULPHUR DIOXIDE (DRY & WET)				
SULPHUR TRIOXIDE				
SULPHURIC ACID (<75%)			Consult	

Medium	Fluolion® 200	Fluolion® 700	Fluolion® 800	Fluolion® 900
SULPHURIC ACID (>75%)		Consult	Not recommended	
TANNIC ACID				
TITANIUM DIOXIDE				
TITANIUM TETRACHLORIDE				
TOLUENE				
TRANSFORMER OIL				
TRICHLOROETHANE				
TRICHLOROETHYLENE				
TURPENTINE				
UREA				
VINYL ACETATE				
VINYL CHLORIDE				
WHITE LIQUOR				
WHITE SPIRIT				
XYLENE				

Last revision: 24/01/2023

Trademark acknowledgements

James Walker acknowledges the following trademarks as mentioned in this document. All other names bearing the ® symbol are registered trademarks of James Walker. Freon® - El du Pont de Nemours and Company or its affiliates Klea® - Mexichem S.A.B. de C.V. Dowtherm® - The Dow Chemical Company

Information

Information given in this publication is given in good faith and represents the results of specific individual tests performed in a laboratory by James Walker or third parties in accordance with the appropriate methodologies. No representation or warranty is given in relation to such information.

Values and/or operating limits given in this publication are not an indication that these values and/or operating limits can be applied simultaneously. While such results may comprise useful additional information and are industry standard tests, they are no substitute for conducting your own tests and engineering analysis and satisfying yourself as to the suitability of the material or product you select.

Please also note that a material or product tested in accordance with the quoted methodology may not perform to such values in application and/or under different test conditions or methodologies for a variety of reasons. These include, but are not limited to the environment to which it is exposed, storage, handling and installation processes, interactions with housings and other parts or, in the case of materials, the design of any product made from that material.

Our personnel will be happy to discuss any historical examples we have of the material or product having been previously used in a particular application.

To ensure you are working with the very latest product specifications, please consult the relevant section of the James Walker website: www.jameswalker.biz.