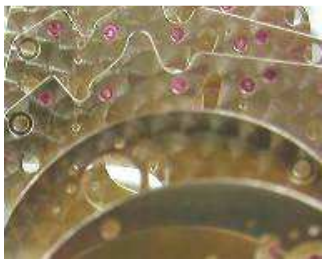
PROMOSOLV™ 7132

INVENTEC PERFORMANCE CHEMICALS

PERFORMANCES



Used in the watch, aircraft, electronic industries, PROMOSOLV™ 7132 has been specially developed as **protective agent against moisture, dust, oils and other contaminants which might come from the surrounding conditions.**

Because of its solvency power, its very low surface tension, the nonflammability and the quick evaporation rate of PROMOSOLV™ 7132, **it is the best adapted product to protect mechanical and electrical parts by a simple dip into it.**

This High-Tech protective fluid has no ODP and its thermal and chemical stability and its very low toxicity provide the best compromise for the safety in use and the environment.

Other PROMOSOLV™ hydrofluoroethers, azeotropics or mixtures

	Formulation	Boiling temperature	Application
PROMOSOL V™ RN1	Pentafluorobutane and HFE-7100	44°C	Film cleaning and heat transfer
PROMOSOL V™RN2	Pentafluorobutane, HFE-7100 and isobutanol	43°C	Degreasing cleaning with co-solvents
PROMOSOL V™NDE	Pentafluorobutane, HFE-7100 and 1,2 TDE	40°C	Degreasing and flux removal
PROMOSOL V™DS1	HFE-7100 + additive	60°C	Spot free drying, after detergent cleaning

SPECIFICATIONS

Characteristics :	Units :	Methods :	Values :
Aspect		Visual	*Transparent, colourless*
Density (at 20°C)	kg/cm³		*1,5*
Ethers methoxynonafluorobutyl	% weight		*99,99*

CHARACTERISTICS

Property @	Units	Promosolv 7132	CFC-113	HCFC-141b	Trichlor-ethylene	Methylene Chloride
Boiling point	°C	61	48	32	87	39.8
Freezing point	°C	-135	-35	-103	-86	-96.7
Flash point		None	None	None	None	None
Density	g/cm³	1.5	1.56	1.23	1.46	1.32
Superficial tension	mN/m	11-12	17.3	19.3	22	25.5
Heat transfer						
Vapour pressure	kPa	22,6	44.1	75.9	10	73.6
Dynamic viscosity	mPa.s	0.6	0.68	0.43	0.62	0.425
Latent heat of vaporization	kJ/kg@bp	125	146	223	265	391
Specific heat	kJ/kg K	1.17	0.92	1.26	0.93	1.3

PACKAGING TYPE

Packaging types of 30 kg and drums of 273 kg available.

STORAGE & SHELF LIFE

PROMOSOLV™ 7132 is not flammable in the standard conditions of use or storage. This fluid is highly stable to thermal and chemical reaction when used or stored in normal conditions. Some more procedures are detailed into the safety data sheet available on request. This product does not sustain combustion according to the norm: ASTM D4206-86 (< 1 second).

To ensure the best product performance it is recommended to store the products in closed packaging types.
Shelf life: 18 months under these conditions.

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CONDITIONS OF USE

Material compatibility

PROMOSOLV™ 7132, as with the most fluorinated liquids, the HFEs of 3M are absorbed by the plastics and the fluorinated elastomers in case of a prolonged exposure.

Metals	Plastics	Elastomers
Aluminium	Acrylic (PMMA)	Butyl rubber*
Copper	Polyethylene	Natural rubber
Carbon steel	Polypropylene	Nitril rubber
Stainless steel 302	Polycarbonate	EPDM
Brass	Polyester	
Molybdenum	Epoxy	
Tantalum	PET	
German silver	ABS	
Titanium	PMMA	
Zamac	C-PVC	

Tested compatibility for an exposure of 1 hour at boiling temperature.
*Butyl rubber is preferable for a prolonged exposure > 1 month.
Exceptions: swelling of PTFE and silicon rubber

The compatibility tests of PROMOSOLV™ 7132 show a good compatibility with a large range of metals, plastics and elastomers, similar to the performance of perfluoronated liquids. Nevertheless the end-users should be testing long period specific materials.

A good compatibility with plastics particularly sensible as the polycarbonate and the PMMA indicate a possible use in the cleaning unit containing numerous components.

Applications:

PROMOSOLV™ 7132 can be used by dipping, brush, spray or centrifugation for:
- The watch industry: prevent the oil swelling and humidity.
- The electronic: against moisture, dust and oil.
- Aircraft, space, military etc.

Fluorinated coatings own such a low surface tension that it repels all kind of liquids. Solid contaminants do not adhere easily on treated surfaces.
This very low surface tension provides an excellent adherence property to most surfaces and also PTFE and glass and its thermal and chemical stability and its very low toxicity provide the best dielectric properties.

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HSE

Property @	Units	HFE-7100	CFC-113	HCFC-141b	Trichlor-ethylene	Methylene Chloride
Environmental data :						
Ozone depletion pot.	ODP	0.00	0.80	0.10	<0.005	<0.005
Global warming pot.	GWP	320	5000	630	<10	<100
Atmospheric lifetime	Years	4.1	85	9.4	8	0.5
Toxicity						
Exposure average: 8h	ppm	750	500	500	25	50
VOC		YES	YES	YES	YES	YES

R phrases:	**R** 53:	May cause long-term adverse effects in the aquatic environment
S phrases:	**S** 21:	When using do not smoke
	S 51:	Use only in well-ventilated areas
	S 57:	Use appropriate container to avoid environmental contamination

INVENTEC provide a recycling program for the used products. A technical information sheet describes the procedure « Eco-Program » which establishes a full report of the returned fluid, where and how this fluid was used and which specifies information, it is not been contaminated with some other substances. This necessary document shall be provided to you.

Please read carefully the safety data sheet of the product PROMOSOLV™ 7132 before use. All safety measures should be taken. In all kind of handling or exposition to the product, the individual protection recommended by the safety data sheet should be taken. The typical figures used here above can be changed without notice.

For end-of-life products, please refer to our service sheet Ecoprogram solvents

This data is based on information that the manufacturer believe to be reliable and offered in good faith. In no event will INVENTEC be responsible for special, incidental and consequential damages. The user is responsible to the Administrative Authorities (regulations for the protection of the Environment) for the conformity of his installation.

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