## GREENWAY PRODUCT





# PROMOSOLV<sup>TM</sup> DR4

#### RINSING & DRYING SOLVENT CO-SOLVENT, VAPOR PHASE, FLUSHING & DRYING PROCESS VERY LOW GWP & REDUCED ATMOSPHERIC LIFETIME

## **BENEFITS**

PROMOSOLV DR4 is especially designed to replace rinsing solvents with a high HSE impact and to offer a product in accordance with the latest and future environmental regulations. The very low surface tension allows to penetrate very tight or difficult to access spaces, making sure any cleaning chemistry is fully removed.

It can be used in combination with our TOPKLEAN<sup>TM</sup> range in co-solvent cleaning process to offer an environmentally friendly solvent solution for degreasing without compromising on high cleaning performance. PROMOSOLV DR4 can also be used to remove fluorinated & silicon oils or light contaminations like fingerprints, soil & particles in a vapor phase or flushing process. Besides, it is an equivalent to the phased out **Novec<sup>TM</sup> 7200** as it has the same proportion of components and same properties.

PROMOSOLV DR4 is compatible with all metals and alloys, including very sensitive ones. It has also good compatibility with most plastics & elastomers, however it is necessary to test before use.

PROMOSOLV DR4 is formulated with safety in mind, which resulted in a product that is non-flammable and has no flash point.

PERFORMANCE	<ul> <li>Thermally and chemically stable in use</li> <li>The very low surface tension allows deep cleaning &amp; rinsing of parts with complex geometry</li> <li>Short cleaning, rinsing and drying times</li> </ul>
соѕт	<ul> <li>Continuous recycling in equipment for a long bath-life</li> <li>Can be returned for recycling and re-use</li> <li>The relative high boiling point reduces risk of solvent drag, so limiting consumption</li> </ul>
HSE	<ul> <li>Very low toxicity</li> <li>Very low Global Warming Potential (GWP) &amp; no Ozon depletion potential (ODP)</li> <li>Non-flammable</li> <li>Low environmental impact: GREENWAY product</li> </ul>

## SPECIFICATIONS

SPECIFICATIONS	VALUES	METHODS	
Aspect	Colorless, clear	Visual	
Purity (%)	> 99,0	BRY-MO-121	

## **CHARACTERISTICS**

CHARACTERISTICS	VALUES		
Boiling point (°C / °F)	76°C / 169°F		
Freezing point (°C / °F)	-138°C / -216°F		
Flash point	No		
Density (g/cm³) @25°C	1.43		
Surface tension (dynes/cm) @20°C	13.6		
Vapor pressure (mm Hg) @25°C	109		
Dynamic viscosity (mPa.s) @20°C	0.61		
Latent heat of vaporization (cal/g@bp)	30		
Specific heat (kJ/Kg.K) @25°C	1,21		

## PROCESS RECOMMENDATION

The best process will depend on factors such as operating conditions, equipment, desired cleaning time and the nature of contaminants. Our team is ready to advise you.

- Do not remove parts too quick out of the drying zone to prevent unwanted loss of solvent.
- Compatibility report with different materials is available on request.

#### PROCESS EXAMPLE



## PACKAGING, STORAGE & SHELF LIFE

- Keep products in closed original packaging and store at room temperature.
- Shelf life is minimum 18 months from production date when kept in recommended conditions.

#### AVAILABLE PACKAGING



250 Kg DRUM

35 Kg DRUM

Please verify the packaging details, including volume and availability, with your sales representative, as they may vary depending on the production facility where the product is manufactured.

## HEALTH, SAFETY & ENVIRONMENT

PROMOSOLV DR4 is a GREENWAY product. More info on our Greenway concept via this link.



#### MAIN CONTRIBUTORS WHICH REDUCE IMPACT:

#### **HUMAN HEALTH & SAFETY**

Non-flammable & no flashpoint: 100% safe for storage and when used in equipment

#### Non-toxic, no corrosive impact & no S risk phrases

#### ENVIRONMENT PROTECTION & RESOURCES SAVINGS

- Low environmental impact: no H labelling regarding environment
- Can be returned for recycling and re-use: ECOPROGRAM
- Reduce consumption of product, consumables, water & energy



PROPERTIES	PROMOSOLV DR3	PROMOSOLV DR4	HFE 347	HFC 43-10
Ozone Depleting Potential (ODP)	0.00	0,00	0,00	0,00
Global Warming Potential (GWP)	320	55	580	1650
Atmospheric lifetime (years)	4.1	0,77	6	16,1
VOC	yes	yes	yes	yes
Flashpoint	no	no	no	no

Contains no Reach Substances (on Candidate list, Annex XIV & XVII) / Contains no persistent organic pollutant (EC 850/2004) / Contains no Import/Export Hazardous substances (EU 649/ 2012).

Used polluted product can be returned to us for recycling if regulations permit. Please contact your local sales contact for more details on our ECOPROGRAM.

Please refer always to the Safety Data Sheet (SDS or MSDS) prior to use. Our SDS can be downloaded at <u>www.quickfds.com</u>. We will request to provide your email address, so we can automatically send you a new version of the SDS when a future update would occur.

## **TECHNICAL SUPPORT & FREE-OF-CHARGE TESTING**

Inventec has a worldwide dedicated Technical Support team to help you along the various stages of our cooperation.

Depending on your request, we provide online or onsite support

- to select the right product based on your specific needs.
- to assist you in your product qualification process.
- to guide you with the initial set up of your process at all your worldwide manufacturing facilities.
- to provide fast response on technical issues which could occur at any time during mass production.

Customers are also welcome in our CLEANING CENTERS to see the process in action and to get convinced by our solutions. We cover water- and solvent based processes.

Inventec is unique in the world by developing not only cleaning materials but also soldering and coating solutions. These materials are very closely linked with each other from a process point of view. Talking to our Technical Team, who understands very well these 3 different product groups, will help you greatly to overcome technical challenges within your overall process.

Contact our technical support via contact@inventec.dehon.com or your local sales representative.

## **ABOUT INVENTEC**

Inventec is a global provider of SOLDERING, CLEANING, COATING, COOLING materials for Electronic, Semiconductor and Industrial applications. For over 60 years we have shown leadership in innovation by putting HEALTH IMPACT, SUSTAINABILITY and RELIABILITY at the core of our product development.

With ISO 9001 & 14001 production sites in France, Switzerland, USA, Mexico, Malaysia and China we can guarantee a smooth and cost-effective supply chain.

We supply to many industries but the excellent performance of our products in applications which demand high reliability, leads us to focus especially on the AUTOMOTIVE, AEROSPACE, SEMICONDUCTOR, ENERGY and MEDICAL industry.

www.inventec.dehon.com



In accordance with the Annex II of Directive 2011/65/UE (RoHS), including its amendments, we certify that this product does not contains quantities above 0.1% of Hg, Pb, Cr VI, PBB, PBDE, DEHP, BBP, DBP, DIBP and above 0.01% of Cd

This data is based on information that the manufacturer believes to be reliable and offered in good faith. In no event will INVENTEC PERFORMANCE CHEMICALS 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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