



MAXIMIZING CLEANING PERFORMANCE WITH DOWCLENETM* 1601

DOWCLENETM* 1601 is a virgin, high-performance modified alcohol solvent with both non-polar and polar properties. Produced synthetically, it is especially formulated to meet the high requirements of precision parts cleaning in closed cleaning machines.

DOWCLENETM* 1601 provides excellent cleaning performance due to its:

- Outstanding solvency power
- Efficient cleaning of fats and oils
- Capabilities to clean a variety of polar contaminations
- Residue-free drying

Thanks to its partial water solubility, DOWCLENETM* 1601 can be closely monitored and stabilized for a safe and reliable process. With the state-of-the-art stabilizer systems of the MAXISTAB™ S-Series, process challenges associated with organic acids, sulphur compounds and chlorinated oils can be counteracted effectively.

DOWCLENETM* 1601 has a high environmental compatibility and a low toxicity. Delivery of the product in the SAFE-TAINER™ System further ensures safe handling, storage and transport of the solvent.



A viable alternative to water-based cleaning

Because of the key cleaning principle “Equal Solves Equal”, water-based cleaning system might not achieve fully optimized cleaning results for non-polar contaminations such as fat or oil. With DOWCLENETM* 1601, its non-polar and partially polar properties mean it can effectively remove non-polar contaminants as well as water-based contaminations in many situations. The extended applications of DOWCLENETM* 1601 makes it a viable, and in many cases, better alternative to water-based cleaning processes.

Other advantages include:

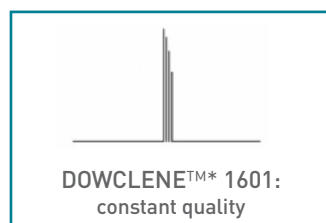
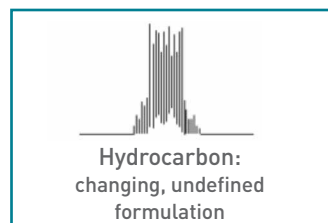
- The ability of DOWCLENETM* 1601 to solve contaminations by itself renders the addition of other chemicals such as surfactants and builder unnecessary.
- Efficient re-use of the cleaning agent through distillation within the cleaning machine ensures consistent cleaning quality, longer solvent lifespan and lower lifecycle costs.
- Process monitoring is easy since there is no need to observe surfactants and builder concentrations.
- The much higher evaporation rate of DOWCLENETM* 1601 minimizes energy usage for drying and ensures residue-free drying.
- No water is required for the cleaning process.
- There is less space requirement for the cleaning machine.

When the required technical cleanliness can be achieved with DOWCLENETM* 1601, the process is normally much more efficient than a water-based cleaning system.

Unique formulation ensures stable distillation and outstanding cleanliness

The precise composition of DOWCLENETM* 1601 allows for stable distillation with higher recycling rates. In comparison to standard hydrocarbons which consist of changing and undefined formulations (see gas chromatogram below), DOWCLENETM* 1601 has a stable flash point as well as a defined and narrow boiling range. This makes residue-free drying possible and enables outstanding cleaning results with high surface tension.

Gas chromatogram comparison – DOWCLENETM* 1601 has a much more defined boiling range



Increased process stability through optimized solvent management

The water solubility of DOWCLENETM* 1601 does not only extend its cleaning capabilities, it also ensures a reliable and safer process: Polar acids are solved in water, and water is solved in DOWCLENETM* 1601. Measuring the acid content in a solvent sample taken from the cleaning machine can therefore provide representative information about the solvent condition. Where necessary, preventive stabilization is carried out to avoid solvent acidification which could otherwise result in machine challenges and related downtimes. Such corrective procedure will not be possible with completely non-polar, undefined standard hydrocarbons.

Overview of cleaning capabilities

		Water-based process	Standard hydrocarbon	DOWCLENETM* 1601
Contamination	(Mineral-) Oils (natural/synthetic)	0	+	+
	Additive enriched oils (e.g. EP-Additives)	0	0	+
	Oils with polar additives (e.g. AW-Additives)	+	0	+
	Emulsions/cooling lubricants	+	-	0
	Fats and waxes	0	+	+
	Oil-based corrosion protection	0	+	+
	Water-based corrosion protection	+	0	0
	Finger prints	+	-	0
Quality	High surface tension required (e.g. for coating, painting, brazing, welding, adhering)	+	0	+
	Final cleaning	+	0	+
	Small parts (e.g. ballpoint ball)	-	0	+
	Complex parts (e.g. blind holes)	-	+	+
Process Safety	Reliable measurement possibilities of solvent condition	+	-	+
	Measurement complexity/Effort	-	n/a	+
Running Costs	Bath lifetime	-	0	+
	Labor costs	-	+	+
	Space requirements	-	+	+

- + Good
- 0 Average
- Insufficient

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