

Actrel™ fluids: Proven solutions for your industrial cleaning needs

Energy lives here™

With over 30 years of effective and proven cleaning performance, Actrel™ fluids developed by ExxonMobil are leading hydrocarbon-based fluids for industrial cleaning applications.

Applications and benefits

ExxonMobil offers a range of lower-toxicity premium fluids specifically suited for the cleaning of machined parts, compared to white spirits or kerosene. In addition to meeting your performance expectations, these cleaning fluids offer the potential to improve your manufacturing processes, the quality of the goods you produce and their perceived value to your customers.

- **Consistent and predictable cleaning:** narrow boiling ranges provide reliable drying rates and easier recovery and recycling
- **Tailored cleaning solutions:** a broad portfolio of optimized boiling range, flash point and evaporation rates
- **Environment friendly, operator safety, improved workplace:** with High OELs (Occupational Exposure Limits), safer operations and lower exposure risks compared to conventional fluids

Typical properties of Actrel fluids

Parameters	Test Methods	Actrel fluids						
		Actrel 1100 NHD	Actrel 1140L	Actrel 1178L	Actrel 3338L	Actrel 3356L	Actrel 3363L	Actrel ED33
Suitable application		Fast drying	Manual dipping	Heat treatment	Precision cleaning	Precision cleaning	Precision cleaning	Dewaxing & deflusing
Flash Point (°C)	ASTM D56 ASTM D93^	< 0	49	82^	44	53	64^	50
Distillation Range (°C)	ASTM D86 ASTM D1078^	94 – 99^	169 – 187	207 – 240	165 – 177	178 – 189	185 – 198	160-192
Surface Tension @ 25°C (dynes/cm)	Calculated## ASTM D1331^	20.8	25.3	26.8	24.1	24.7	25.0	24.1^
Aniline Point(°C)	ASTM D611	69	69	75	84	85	81	38
Evaporation Rate (n-BuAc =100)^	Calculated##	460	12	1.3	14	6.9	4.5	13
Density @ 15°C (kg/L)	ASTM D4052	0.695	0.776	0.795	0.749	0.758	0.765	0.800
Vapour Hazard Ratio### @ 20°C, VHR	Calculated##	142	7	1	7	4	3	12
Silicone content		Silicone is not intentionally used by ExxonMobil in these products. ###						

n-BuAc = n-butyl acetate is used as a reference for evaporation rate

Calculated using EM methods based on spot analysis

Vapour Hazard Ratio is used as an inhalation risk assessment tool to evaluate worker's exposure. It is calculated using the ratio of equilibrium vapor concentration @ 20°C and Occupational Exposure Limit (OEL)

Silicone is not intentionally used by ExxonMobil in these products. Although it is not routinely tested for its presence, based on product composition knowledge the substance is not expected to be present. However, the fact that the substance is not intentionally used by ExxonMobil in these products does not exclude that trace levels of the substance may be present as a result of the specific characteristics of the raw materials and/or of the manufacturing process.

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CLEANVY machines

Hydrocarbon-based Cleaning Equipment

Optimized Cleanvy machines are perfect for high-quality industrial cleaning for complex parts. Paired with Actrel 3356L, Actrel 3363L or Actrel 1178L fluid, it satisfies a variety of high quality cleaning requirements. In addition it provides an improved workplace environment due to less odor, improved workers' safety due to higher flash point and lower running cost due to less evaporative losses given narrower distillation range.

CLEANVY FVH Series - Precision cleaner



Basket Size	W300 X D400 X H200
Dimension of Equipment	W3,500 X D1,720 X H2,340
Parts Weight	20kg
Cleaning Process	No.1 Bath : Ultrasonic No.2 Bath : Ultrasonic (Option : Vacuum deaerated cleaning, jet stream, showering, rotation)
Ultrasonic Wave	25kHz 750W ~
Drying Process	Vacuum drying (less than 5 torr)
Vacuum Pump	Vacuum Pump Sealing with Hydrocarbon-base Solvent / Mechanical Booster Pump
Solvent Volume	450 liter
Loader & Unloader	To be supplied according to customer's requirements
Power Supply	3-phase 200v 18kw
Utility	Air : 0.4 Mpa ~ Exhaust duct : 200dia Coolant : 20L/min (20°C)

BIOVA-MC1 Series - Heat treatment cleaner

Basket Size	W610 X D1,220 X H700
Dimension of Equipment	Return type: W2,500 X D4,800 X H4,500 Through type: W3,000 X D6,800 X H4,500
Parts Weight	700kg
Cleaning Process	No.1 Process: Rough shower cleaning No.2 Process: Vacuum cleaning (Option : Ultrasonic)
Drying Process	No.3 Process: Vapor cleaning & vacuum dry (less than 5 torr)
Vacuum Pump	Vacuum Pump Sealing with Hydrocarbon-base Solvent / Mechanical Booster Pump
Solvent Volume	2,500 liter
Power Supply	3-phase 200v 105kw
Utility	Air : 0.3 - 0.5 Mpa Exhaust duct : 200dia Coolant : 200L/min (20°C)



JFE Shoji Electronics Corporation