



APAR

Tomorrow's solutions today

POWEROIL®

Powering Ahead



POWEROIL

QUENCHING OILS

APAR SOLUTIONS FOR METALWORKING FLUID APPLICATIONS



Quenching is normally associated with fire, smoke and heat all around its vicinity. As a process, Quenching is one of the key steps in ensuring reliable and high quality production of end components. Proper understanding of Quenching process and Quenching oils in particular helps end user in reduction of job rejections, improved finish with greater acceptance and efficiency and maximum safety of operating conditions.



ABOUT US

ABOUT QUENCHING



ABOUT POWEROIL QUENCHING OILS

Apar offers a complete range of mineral oil based Quenching oils, from cold to hot, from slow to superfast quenching, from the smallest to the largest of components, thereby addressing any requirement of the customers. Further, Apar has the capability to develop any product unique to customer needs. Apar Poweroil Quenching oils are specially designed from highly refined, deep treated mineral base stocks having excellent oxidation and thermal stability and low volatility. Additives are carefully chosen to address specific heat treatment needs of optimum hardness with minimized cracking and distortion. Specially crafted package ensures low oil top-ups, lower oil degradation & extended oil life.

FEATURES AND PERFORMANCE BENEFITS OF POWEROIL QUENCHING OILS

FEATURES	BENEFITS
High and uniform/constant rate of cooling	Improved “As Quenched hardness” Deeper & Uniform hardening even in the core
Optimum viscosity at operating temperature	Ensures proper Quenching, reduces carry over losses and aids ease of cleaning post quenching operation
Low volatility at operating temperatures	Minimizes losses due to evaporation, leading to reduced top ups and hence reduced maintenance costs
High thermal and Oxidation stability	Reduces sludge formation, minimizes oil thickening resulting in extended oil life

POWEROIL QUENCHING OILS – SELECTION GUIDE



Cold Quenching Oils

	Slow quenching	Slow quenching	Medium Fast Quenching		Accelerated Quenching	
	POWEROIL Quench 32M	POWEROIL Quench SL 11	POWEROIL Quench Super 20 HAL	POWEROIL Quench Super 20 Special	POWEROIL Quench Super 20	POWEROIL Quench SF 18
Product Details	General purpose quenching oil. Suitable for quenching of high carbon steels and wide variety of steel components	Inputs carefully chosen to enable accelerated quenching and good wetting characteristics. Ideally suited for components that demand optimum hardness through accelerated quenching	Blended from highly refined base stocks and finely balanced additive package to ensure optimum Neutralization and low moisture levels. Specially designed to meet the stringent requirements of a leading OEM	Optimum hardness with uniform heating and minimized cracking/ distortion enabled by special additive pack carefully chosen with select highly refined base oils	Premium accelerated cold quenching oil with almost nil fumes/ smoke generation. Used in critical applications requiring high hardness levels	Best in class, superfast accelerated cold quenching oil with outstanding oxidation and thermal stability. Ideally suited for low hardenability, low alloy steel components requiring very high level of hardness
KV @ 40°C, cSt	30	30	19	25	19	16
Flash Point, COC, °C, min	190	190	198	208	180	190
TAN, mg KOH/gm	0.3	0.5	0.2	0.88	0.3	0.58
Maximum Cooling rate, °C/sec	66	88	103	100	109	119
Temperature at MCR, °C	534	563	632	601	643	598

Above values are typical and will vary from batch to batch. They do not constitute specification of the product.



Hot / Marquenching Oils

Medium Fast Quenching

	POWEROIL Quench MQ 120	POWEROIL Quench MQ 120 (M)	POWEROIL Quench MQ 150
Product Details	Usage of hydrotreated base oils and special additive package helps impart excellent thermal and oxidation stability. Operating working temperture is 80-130 °C. Suitable for marquenching of medium carbon and low alloy steels components subjected to distortion	Carefully chosen hydrotreated base oils with optimum viscosity to address the needs of controlled hardness, minimum distortion and brittleness of the component. Operating working temperature is 80-130 °C	Outstanding stability to heat and oxidation due to high quality hydrotreated base oils and special additive package. Operating working temperature is 80-150 °C. Suitable for marquenching of medium carbon and low alloy steels wherein distortion and ovality are the key concern areas
KV @ 40°C, cSt	66	89	175
Flash Point, COC, °C, min	236	248	250
TAN, mg KOH/gm	0.2	0.36	0.3
Maximum Cooling rate, °C/sec	87	86	83
Temperature at MCR, °C	583	598	616

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