



# Shell Ondina Oil 934

## Medicinal White Oil

Shell Ondina Oils are highly refined, non-stabilised, aromatic-free paraffinic or naphthenic white mineral oils complying with the stringent pharmacopoeia purity requirements. Ondina oils can be used in pharmaceutical, food packaging, cosmetic and other applications, where this high purity is required by legislation or important for the quality of the finished product.

### DESIGNED TO MEET CHALLENGES

#### Specifications, Approvals & Recommendations

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

#### Typical Physical Characteristics

Properties		Method	Shell Ondina Oil 934
Specifications - European Pharmacopoeia 4			Liquid Paraffin
Specifications - US Pharmacopoeia 25 / NF 20			-
Specifications - EU Directive 2002/72/EC			Yes
Colour (Saybolt)		ASTM D156	+30
Density	@15°C kg/m <sup>3</sup>	ISO 12185	865
Refractive Index	@20°C	ASTM D1218	1.475
Flashpoint (COC)	°C	ISO 2592	240
Pour Point	°C	ISO 3016	-12
Dynamic Viscosity	@20°C mPa*s	ISO 3104	205
Kinematic Viscosity	@20°C mm <sup>2</sup> /s	ISO 3104	238
Kinematic Viscosity	@40°C mm <sup>2</sup> /s	ISO 3104	76
Kinematic Viscosity	@100°C mm <sup>2</sup> /s	ISO 3104	9.7
Carbon Type Distribution : C/A (S-corr.)	%	DIN 51378/ASTM D2140 mod.	-
Carbon Type Distribution : C/N (S-corr.)	%	DIN 51378/ASTM D2140 mod.	38
Carbon Type Distribution : C/P (S-corr.)	%	DIN 51378/ASTM D2140 mod.	62
Refractive Intercept (RI)		DIN 51378	1.0434
Viscosity Gravity Constant (VGC)		DIN 51378	0.793
Evaporation Loss (22 hrs)	@107°C % m/m	ASTM D972	0.8
Noack Volatility (1 hr)	@250°C % m/m	ASTM D5800	3.5
Molecular Weight	g/mol	ASTM D2502	507
Carbon Number at 5% Distill. Point		ASTM D2887 mod	>C25
Boiling Range (Sim. Distillation)	°C	ASTM D2887	370 - 600
Purity Requirements for Medicinal White Oils acc. Europ.Pharm.			Pass

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

## Health, Safety & Environment

### ■ Health and Safety

Shell Ondina Oil 934 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

### ■ Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

## Additional Information

### ■ Advice

Advice on applications not covered here may be obtained from your Shell representative.