



SIPPRO

Process Oils for Adhesives

A range of high-quality paraffinic and naphthenic oils for use both in hot melt and pressure sensitive adhesives

- Glues for paper, cardboard and corrugated board for the packaging industry
- Automotive adhesives for structural and interior bonding including cushioning materials
- Adhesives for bonding parts such as coil winding and coil ends in the electronics industry
- Structural and non-structural bonding in the construction industry
- Book binding glues for the printing industry
- Textile bonding, footwear and leather adhesives
- Adhesives for hygiene products

- ✓ **Exceptional solvency**
- ✓ **Excellent compatibility with wide range of polymers**
- ✓ **Colourless and odourless**
- ✓ **High purity, with very low sulphur and aromatics**
- ✓ **Provide good low temperature performance**
- ✓ **Low volatility**

The SIPPRO portfolio provides a wide range of process oils for use as plasticisers, diluents and extenders for hot melt and pressure sensitive adhesive applications. These products enable adhesives formulators to choose the oil which provides the best balance for the desired industry application. The range encompasses oils of both paraffinic and naphthenic types with a range of viscosities, pour points and aniline points. SIPPRO paraffinic process oils are available with viscosities from 20 cSt to 100 cSt at 40°C and are all highly hydrotreated, very pure and have extremely low levels of sulphur and aromatics. This makes them thermally stable and resistant to UV degradation,

maintaining the high quality of the adhesive. For many adhesive formulations, the odourless and colourless nature of SIPPRO paraffinic oils is a great advantage. Two of the paraffinic products, SIPPRO 68P and SIPPRO 100P, are of European Pharmacopeia and USA FDA 21 CFR 178.3620 (a) quality and can be used for adhesives in sensitive applications, such as sanitary products. The range of SIPPRO N hydrotreated naphthenic grades have viscosities from 10 cSt to 375 cSt at 40°C. Their lower aniline points indicate greater solvency for the elastomeric polymers and tackifier resins used in adhesives, which can enable higher contents of the plasticiser.

Whether hot melt, pressure sensitive, aqueous or two-component, all adhesives must be sufficiently liquid during application to effectively cover the surface to be bonded. In order to formulate an effective adhesive, in addition to the base polymers, tackifiers and antioxidants, the other main component in most formulations are plasticisers. These can be microcrystalline waxes but for many adhesive products the chosen plasticisers are mineral oils.

These process oils are excellent for enhancing wetting characteristics, creating the required flexibility, optimising viscosity, improving low temperature flexibility, and producing a more versatile adhesive. To achieve these features, the characteristics of the oil need to be selected carefully depending on the nature of the polymer and the final application of the adhesive.

The SIPPRO range was specifically designed to provide manufacturers with the flexibility to formulate high quality products which can be used in a wide range of applications. All products in the portfolio meet key performance properties. They are all light coloured or colourless, odourless and have excellent thermal stability and low volatility. Many of the oils are exceptionally pure, with only traces of contaminants such as sulphur. The inclusion of oils of both a paraffinic and naphthenic nature allows adhesive manufacturers to choose from a range of properties to achieve optimal performance for the specific application.

This range includes SIPPRO 20H, 42H and 100H. These are virtually colourless and free from sulphur and aromatics. They have excellent colour stability and low volatility and are recommended for adhesives where a balance of performance and economics are important. The purity of these oils means that they meet the requirements of the NSF HX-1 classification for incidental food contact, making them useful for adhesives used for food packaging.

SIPPRO 68P and 100P are of the highest medicinal quality, meeting the requirements of the European Pharmacopeia and USA FDA 21 CFR 178.3620 (a). This means that they can be confidently used in hygienic adhesives for cosmetic and pharmaceutical applications, where the product can come in contact with human skin. These products also have excellent thermal and oxidative stability, ensuring the transparency of product in which they are used.

SIPPRO 9N, 100N and 375N are naphthenic process oils ranging from 10 cSt to 375 cSt viscosity at 40°C. They all have high polarity with excellent solvency, indicated by their relatively low aniline points. SIPPRO 9N with a typical pour point of -60°C is particularly recommended where low temperature flexibility is required.

TYPICAL CHARACTERISTICS OF SIPPRO BASE FLUIDS

CHARACTERISTICS	SIPPRO 20H	SIPPRO 42H	SIPPRO 100H	SIPPRO 68P	SIPPRO 100P	SIPPRO 9N	SIPPRO 100N	SIPPRO 375N
Viscosity @ 40°C (cSt)	20.5	41.6	112	69.8	102.2	9.7	100	375
Pour Point [°C]	-15	-15	-15	-15	-12	-59	-32	-11
Flash Point [°C]	207	230	260	240	265	146	221	246
Aniline Point [°C]	107	114	126	123	124	71.2	100	104
Sulphur Level (ppm)	<3	<3	<3	<3	<3	50	25	750

The above data is typical and may not fully reflect the product specification.



SIP SPECIALITY OILS AND FLUIDS

For more than 35 years SIP Speciality Oils and Fluids has been a respected and recognised independent marketer and distributor. Based in London, we have been supplying customers in Europe and the wider African and Middle Eastern markets for many years. SIP has one of the most comprehensive product portfolios, covering a wide range of base fluids for many product applications. We are especially known for our extensive range of viscosity

grades of mineral white oils with Halal, Kosher and Vegan approvals, and our premium oils for industrial and drilling applications. We manage our own vessel and road tanker operations in-house, based around our storage hubs in North West Europe and the UK. We pride ourselves on our ability to deliver where our competitors cannot by giving you tight lead times, support for unusual viscosity grades, and our own experienced in-house technical services and operations team who offer a bespoke service.



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