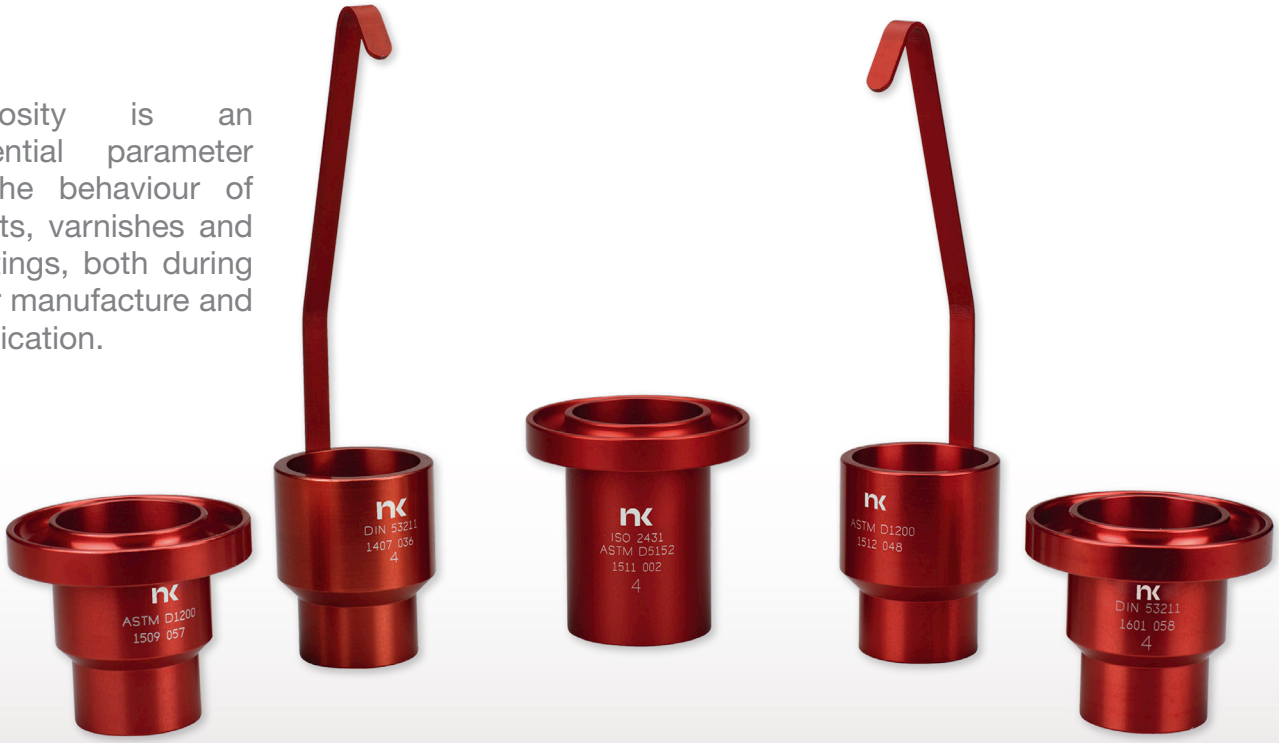
VISCOSITY
VISCOSITY CUPS

Viscosity is an essential parameter in the behaviour of paints, varnishes and coatings, both during their manufacture and application.



STANDARDS

ASTM D1200 · DIN 53211-85 · UNE EN ISO 2431 · NFT 30-014 · ASTM D4212

APPLICATION

Proper viscosity control ensures:

- Better paint application.
- Optimised consumption and performance.
- A reduction in defects such as sagging, orange peel or poor levelling.

During formulation, it is essential to consider the application method, the working temperature and the rheological behaviour of the product (viscosity at different shear rates and thixotropy) to avoid subsequent problems during the application process.

Similarly, when formulating a paint, it is necessary to know both the application method and the temperatures at which it will be applied; therefore, during the development of the mixture, proper control of viscosities at low and high shear rates is required, as well as an assessment of the product's thixotropy.

GENERAL CHARACTERISTICS

Manufactured from anodised aluminium with a stainless steel flow sleeve. Volume 100 ml. Non-standard versions available for comparative testing.

INSTRUCTIONS FOR USE

Viscosity cups allow the relative viscosity of a fluid to be measured quickly and easily by timing the time it takes to flow through a standardised orifice.

- The result is usually expressed in seconds.
- Kinematic viscosity is calculated as the ratio of absolute viscosity to density ($\upsilon = \mu/\rho$).
- Units used: m^2/s, Stokes (St) and centistokes (cSt).

MODELS

FORD cups

ASTM D1200

Volume 100 ml. Made from anodised aluminium with a stainless steel flow sleeve.

Code	Beaker type	Time (s)	Range (cSt)	Viscosity standard
NK-VC1200-1	FORD 1	55-100	10-35	C10
NK-VC1200-2	FORD 2	40-100	25-120	C20
NK-VC1210-2	FORD 2 with Handle	—	25-120	C20
NK-VC1200-3	FORD 3	20-100	49-220	C60
NK-VC1210-3	FORD 3 with Handle	—	49-220	C60
NK-VC1200-4	FORD 4	20-100	70-370	C60
NK-VC1210-4	FORD 4 with Handle	—	70-370	C60
NK-VC1200-5	FORD 5	20-85	200-1200	C200
NK-VC1210-5	FORD 5 with Handle	—	200-1200	C200
NK-VC1200-6	FORD 6	Non-standard	—	—
NK-VC1210-6	FORD 6 with Handle	—	—	—
NK-VC1200-8	FORD 8	Non-standard	—	—
NK-VC1210-8	FORD 8 with Handle	—	—	—

Optional calibration	Code	Description
✓	SER-CE034	ENAC Calibration Certificate for Viscosity Cups

DIN cups

DIN 53211-85

Volume 100 ml. Made from anodised aluminium with a stainless steel flow sleeve.

Code	Cup Type	Time (s)	Range (cSt)	Viscosity standard
NK-VC5300-4	DIN 4	20-80	25-680	C60
NK-VC5310-4	DIN 4 with handle	—	—	—
NK-VC5300-6	DIN 6	Non-standard		
NK-VC5310-6	DIN 6 with handle	—	—	—
NK-VC5300-8	DIN 8	Non-standard		
NK-VC5310-8	DIN 8 with handle	—	—	—

Optional calibration	Code	Description
✓	SER-CE034	ENAC Calibration Certificate for Viscosity Cups

UNE ISO cups

UNE EN ISO 2431

Code	Cup Type	Time (s)	Range (cSt)	Viscosity standard
NK-VC2400-3	ISO 3	30-100	7-42	C20
NK-VC2400-4	ISO 4	30-100	34-135	C60
NK-VC2400-5	ISO 5	30-100	91-326	—
NK-VC2400-6	ISO 6	30-100	188-684	C100

Optional calibration	Code	Description
✓	SER-CE034	ENAC-accredited Calibration Certificate for Viscosity Cups

AFNOR cups

ASTM D4212 · ASTM D1084

Code	Cup Type	Time (s)	Range (cSt)	Viscosity standard
0201850	AFNOR 2,5	30-250	5 a 100	—
0201851	AFNOR 4	20-300	50 a 1100	—
0201852	AFNOR 6	30-300	510 a 5100	—

Optional calibration	Code	Description
✓	SER-CE034	ENAC-accredited Calibration Certificate for Viscosity Cups

ZAHN Cups

NFT30-014

Code	Cup Type	Time (s)	Range (cSt)	Viscosity standard
0201806	ZAHN 1	—	5-60	C20
0201805	ZAHN 2	—	20-250	C60
0201803	ZAHN 3	20-80	100-800	C100
0201801	ZAHN 4	—	200-1200	C100
0201802	ZAHN 5	—	400-1800	C350

Optional calibration	Code	Description
✓	SER-CE034	ENAC-accredited Calibration Certificate for Viscosity Cups

ACCESSORIES

Certified viscosity standards

Code	Cup type	Range (cSt)
0202507	C10	17
0202511	C20	34
0202510	C60	120
0202513	C100	230
0202514	C200	460

Thermal Shirt

Code	
NK-TJ1200	Thermal sleeve for FORD / DIN viscosity cups
NK-TJ2400	Thermal sleeve for ISO viscosity cups

Tripod

Code	
SE-7001021	Tripod, features adjustable legs, spirit level and glass plate

Stopwatch

Code	
SP-810035A	Counter / Time / Alarm. Range: 12/24 hrs. Resolution: 1/100 sec

Thermometer

Code	
HI-151-1	Thermometer with foldable probe for checking the temperature of the sample. Range from -50°C to 300°C