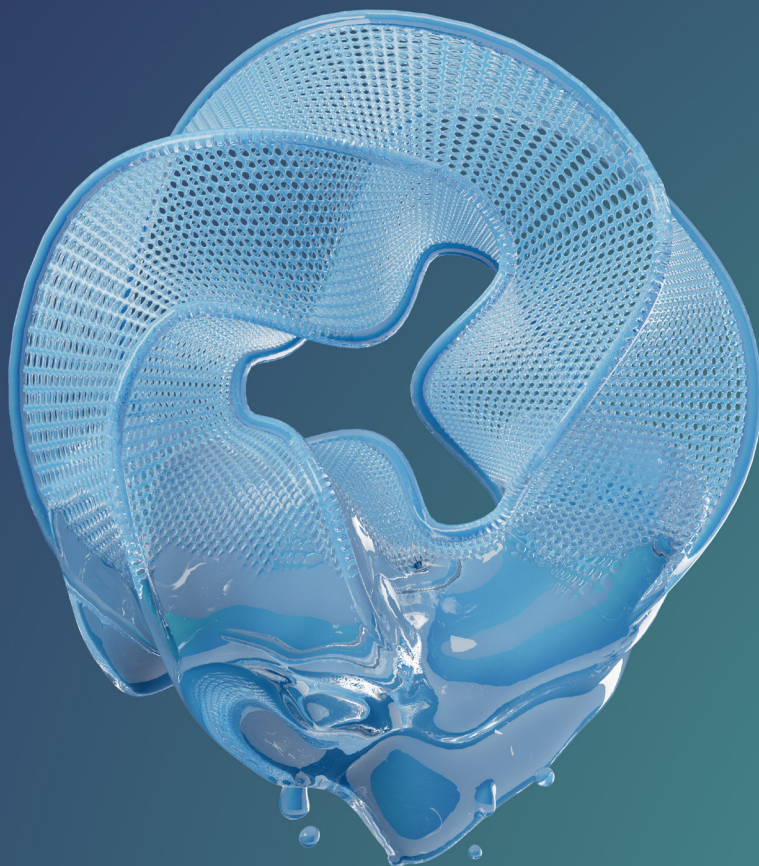


ARKEMA

N3XTDIMENSION[®]

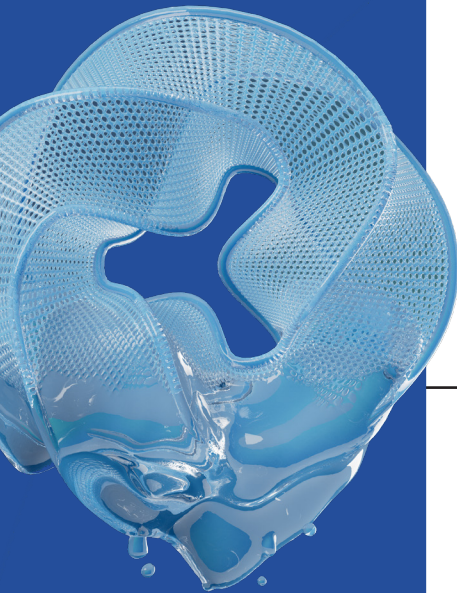
Custom formulations
for UV-curable 3D printing



Liquid resins for energy curing

Arkema, through its Sartomer® and N3xtDimension® product lines, is a pioneer in designing advanced liquid resins for energy-curable additive manufacturing. Decades of supporting the 3D printing industry allows Arkema to be uniquely positioned to build innovative liquid resins specifically designed to address the challenges of the industry. We can synthesize custom structures, deliver advanced thermosetting resins, and engage in collaborative development to bring solutions tailored to mass manufacturing.

The dedicated team of scientists at the Center of Excellence for Energy-Curable Resins are invaluable players in the success of our partners in markets such as medical, dental, electronics, and sports.



N3XTDIMENSION®

N3xtDimension® advanced liquid resins are market leading solutions for energy-curable 3D printing:

- Custom formulation expertise and new materials to enable customer-specific product development.

SARTOMER®

Building blocks and additives, including state-of-the-art tailor-made resins, specialty oligomers, monomers, cationic resins and photoinitiators, enabling a unique toolbox to fine-tune end formulations.

PRODUCT HIGHLIGHTS

- Exceptional freedom of performance design
- High resolution
- Excellent processing
- Regulatory compliance
- Excellent surface finish off the printer

An integrated offering

N3XTDIMENSION®

Custom formulations
for UV-3D Printing platforms

SLA

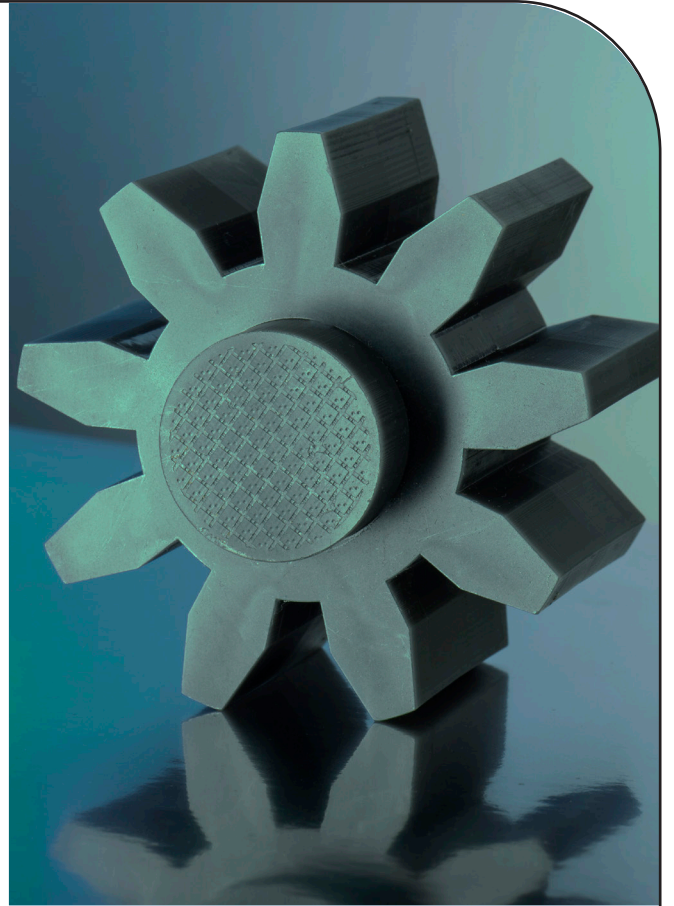
DLP

BJ

MJP

LCD

355 nm | 385 nm | 395 nm | 405 nm



Through its N3xtDimension® product line, Arkema offers formulations and material development to push additive manufacturing to the next level.

- Custom formulation development
- State-of-art printing equipment
- Advanced material performance
- Manufacturing support and services
- Logistics and packaging partner



PARTNER WITH US
FOR YOUR 3D MATERIALS

Our dedicated development team is available to help you achieve **tailor-made materials** to address your specific application challenges.

N3XTDIMENSION® CUSTOM FORMULATIONS



N3D-PR184-BIO FOR MODELING

New bio-based material with 53% bio-content. N3D-PR184-BIO provides reliable, accurate, high-resolution printing for modeling & prototyping applications.

	N3D-PR184-BIO
Appearance	Gray
Viscosity @ 25°C	750 mPa.s
Bio-content	53%
Tensile elongation at break	7%
Tensile modulus	1970 MPa
Max tensile strength	32 MPa
Flexural modulus	2030 MPa
Max flexural strength	70 MPa
HDT @ 0.45 MPa	81°C
HDT @ 1.8 MPa	45°C
Tα, by DMA	118°C

N3XTDIMENSION®
BIO-BASED

With 53% bio-content



KEY FEATURES

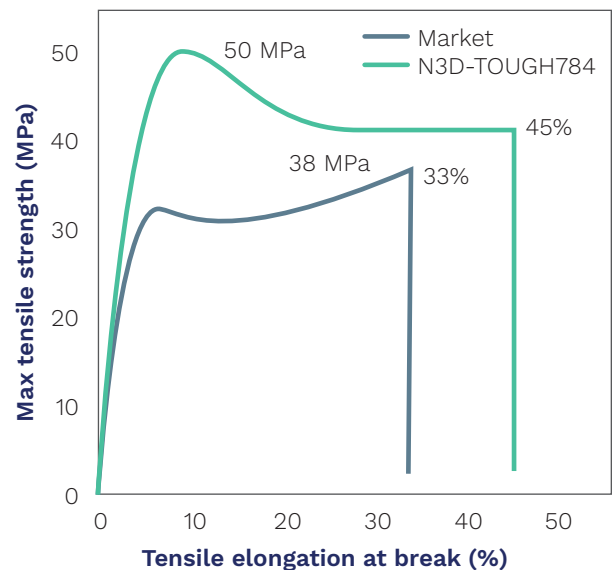
- 53% bio-content
- Reliable, accurate, high resolution printing on DLP printers
- First in a family of high bio-content formulations



N3D-TOUGH784 FOR TOUGHNESS

High-strength material offering an excellent balance of rigidity and flexibility while maintaining good strength.

	N3D-TOUGH784
Appearance	Black
Viscosity @ 25°C	1000 mPa.s
Tensile elongation at break	45%
Tensile modulus	2020 MPa
Max tensile strength	50 MPa
Flexural modulus	1250 MPa
Max flexural strength	58 MPa
Notched Izod impact resistance	50 J/m
HDT @ 0.45 MPa	56°C
HDT @ 1.8 MPa	45°C
Tα, by DMA	104°C



KEY FEATURES

- Moderately high rigidity
- Excellent tensile strength and flexibility
- Superior weatherability
- Plastic deformation

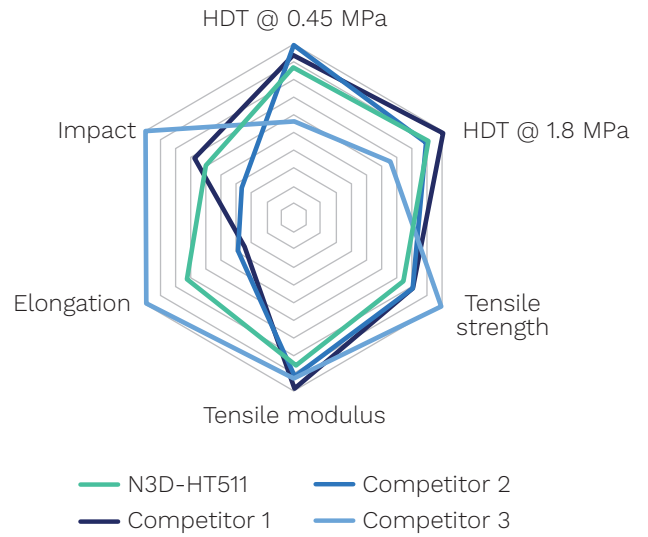
Performance of N3D-TOUGH784 demonstrates higher strength, elongation, and toughness versus competitor in controlled study.



N3D-HT511 FOR HIGH TEMPERATURE

A stiff, high temperature material that is solvent resistant and autoclavable.

	N3D-HT511
Appearance	Black
Viscosity @ 25°C	650 mPa.s
Tensile elongation at break	7%
Tensile modulus	2400 MPa
Max tensile strength	54 MPa
Flexural modulus	2040 MPa
Max flexural strength	81 MPa
HDT @ 0.45 MPa	130°C
HDT @ 1.8 MPa	91°C
T α , by DMA	148°C



N3D-HT511 provides an excellent mix of high HDT and toughness for high-temperature applications.

KEY FEATURES

- Tough & rigid
- High heat deflection temperature
- Chemical & water resistance



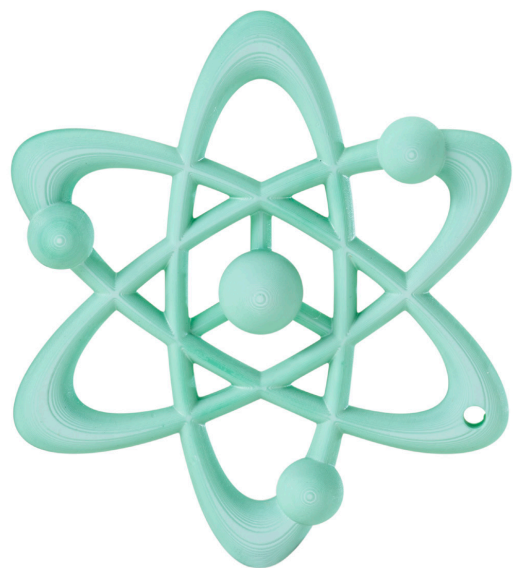
N3D-CAST011 FOR CASTING

A casting material exhibiting excellent positive and negative feature resolution with clean burnout and outstanding casting performance

	N3D-CAST011
Viscosity @ 25°C	115 cPs
Tensile elongation at break	4%
Tensile modulus	900 MPa
Max tensile strength	11 MPa
Flexural modulus	750 MPa
Max flexural strength	13 MPa

KEY FEATURES

- Melts during burnout cycle
- Superb casted surface finish
- Low coefficient of thermal expansion





N3D-DMT303 FOR DENTAL MODELING

A high-performance, rigid 3D printing material that allows for accurate and fast printing of dental models and thermoforming molds for the manufacturing of clear dental aligners.

	N3D-DMT303
Appearance	Off-white/tan
Viscosity @ 25°C	390 mPa.s
Tensile elongation at break	6%
Tensile modulus	2600 MPa
Max tensile strength	52 MPa
Flexural modulus	2530 MPa
Max flexural strength	86 MPa
HDT @ 0.45 MPa	66°C
HDT @ 1.8 MPa	57°C
T α , by DMA	109°C



KEY FEATURES

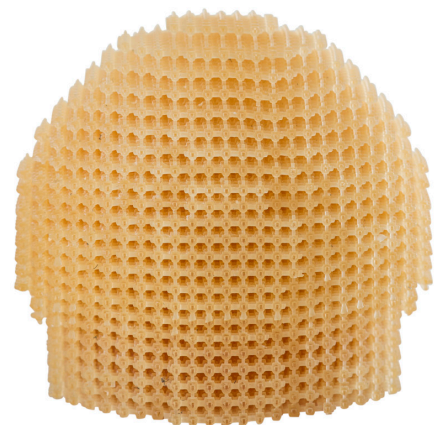
- High accuracy
- High throughput
- Suitable heat deflection temperature for thermoforming applications
- Good feature visualization



N3D-DIELEC731 FOR ULTRA-LOW LOSS

An unfilled, dielectric material with ultra-low loss, suitable for radio frequency (RF) devices.






	N3D-DIELEC731
Appearance	Yellow
Viscosity @ 25°C	1960 cP
Dielectric constant (@ 1 kHz/23°C)	2.98
Dielectric constant (@ 10 GHz/23°C)	2.59
Dissipation factor (@ 10 GHz)	0.0030
Breakdown strength (@ 23°C)	800 V/ μ m
Volume resistivity (@ 23°C)	6.8269E+16 Ω *cm
Surface resistivity (@ 23°C)	2.72018E+16 Ω /sq
CTE 20°C (above T $_g$ /below T $_g$)	76.73/135.3
T $_d$ onset (°C), TGA	216°C




KEY FEATURES

- Ultra-low dielectric loss
- Low moisture uptake
- High breakdown strength
- Stable dielectric constant across broad frequency range

N3XTDIMENSION® CUSTOM FORMULATIONS OFFERING FOR UV-CURING 3D PRINTING

	Product	Highlights	Properties									
			Features	Viscosity @ 25°C (mPa.s)	Tensile elongation at break (%)	Tensile modulus (MPa)	Max tensile strength (MPa)	Flexural modulus (MPa)	Max flexural strength (MPa)	HDT @ 0.45 MPa (°C)	HDT @ 1.8 MPa (°C)	T _g , by DMA (°C)
 BIO-BASED	N3D-PR184-BIO	<ul style="list-style-type: none"> → 53% bio-content verified by ASTM D6866 → Reliable, accurate, high resolution printing on DLP printers → First in a family of high BRC formulations 	750	7	1970	32	2070	70	81	45	118	53
 HIGH STRENGTH	N3D-TOUGH784	<ul style="list-style-type: none"> → Moderately high rigidity → Excellent tensile strength and flexibility → Superior weatherability → Plastic deformation 	1000	45	2020	50	1250	58	56	45	104	-
 HIGH TEMPERATURE	N3D-HT511	<ul style="list-style-type: none"> → Tough & rigid → High heat deflection temperature → Chemical & water resistance 	650	7	2400	54	2040	81	130	91	148	-
 CASTING	N3D-CAST011	<ul style="list-style-type: none"> → Melts during burnout cycle → Superb casted surface finish → Low coefficient of thermal expansion 	115	4	900	11	750	13	-	-	-	-
 DENTAL MODELING	N3D-DMT303	<ul style="list-style-type: none"> → High accuracy → High throughput → Suitable heat deflection temperature for thermoforming applications → Good feature visualization 	390	6	2600	52	2530	86	66	57	109	-

	Product	Highlights	Properties								
			Features	Viscosity @ 25°C (cP)	Dielectric constant (@ 1 kHz/23°C)	Dielectric constant (@ 10 GHz/23°C)	Dissipation factor (@ 10 GHz)	Breakdown strength (@ 23°C)	Volume resistivity (@ 23°C)	Surface resistivity (@ 23°C)	CTE 20°C (above T _g /below T _g)
 ULTRA-LOW LOSS	N3D-DIELEC731	<ul style="list-style-type: none"> → Ultra-low dielectric loss → Low moisture uptake → High breakdown strength → Stable dielectric constant across broad frequency range 	1960	2.98	2.59	0.0030	800 V/μm	6.8269E+16 Ω*cm	2.72018E+16 Ω/sq	76.73/135.3	216

MA

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