

Meeting the high standards of the healthcare industry

www.ineos.com/styrolution

Versatile styrenics solutions
for a wide range of medical and
healthcare applications.



Enabling the future of healthcare

Healthcare is changing – rapidly and globally. Innovations in homecare, diagnostics, monitoring, and drug delivery are driving demand for devices that are more compact, portable, and intelligent. At the same time, rising cost pressures and increasing regulatory complexity require solutions that balance technical performance with efficiency and compliance.

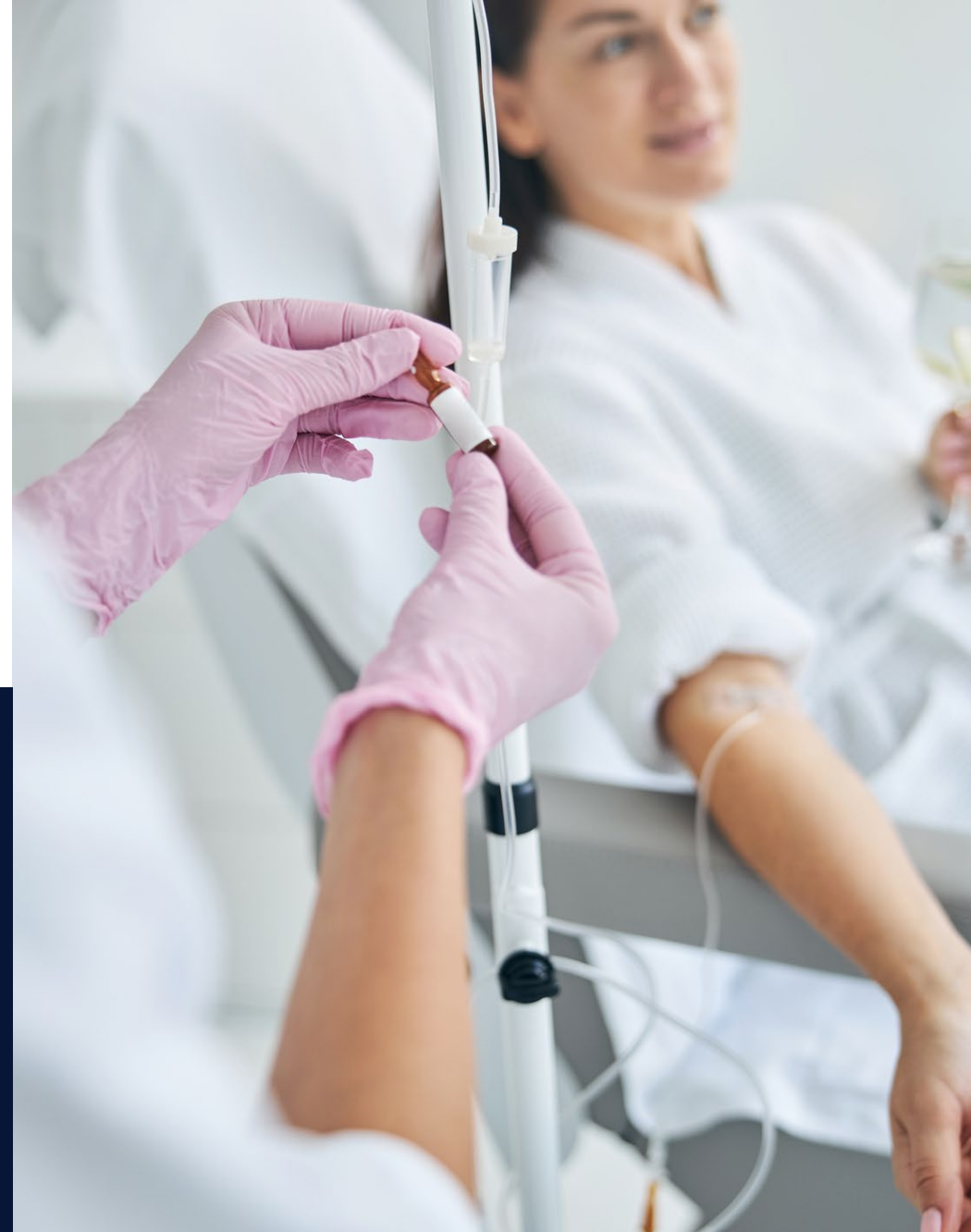
Aging populations, shifting lifestyles, and the continued rise of chronic diseases – including diabetes, obesity, cardiovascular conditions, COPD, and asthma – are placing additional demands on healthcare systems. The need for scalable, cost-effective treatment options is accelerating.

In this environment, material selection is more critical than ever. The right materials support design flexibility, manufacturing efficiency, regulatory compliance, and long-term reliability – enabling the development of safe, high-quality healthcare solutions for a rapidly evolving market.

Styrenics for reliable healthcare performance

Styrenics are proven to have excellent chemical resistance against saturated hydrocarbons, ethanol, alcohol solutions, water, salts, detergents, mineral acids, glycerine, dilute acids and alkalis, and aliphatic amines and amides.

INEOS Styrolution's healthcare-grade styrenics combine this durability with high purity, regulatory compliance, and optimised processing to meet the demands of modern medical devices – from thin-walled, complex designs to lightweight, wearable solutions. Backed by industry expertise and a global supply chain, we support healthcare customers from concept to commercialisation.





Trusted materials for advanced healthcare solutions

As healthcare advances, so do the expectations for materials that combine high performance with responsibility. INEOS Styrolution's healthcare-grade styrenics are compliant with medical regulations, while offering design flexibility, durability, and surface quality required for today's medical applications – from clear diagnostic components to lightweight, wearable devices.

Many of our grades are available in eco-friendly versions – including bio-attributed, and recycle-based options – supporting our customers' sustainability goals. These grades are certified through third-party programmes such as ISCC PLUS, underscoring our commitment to transparency, circularity, and certified sustainability. They are drop-in solutions that match the quality and performance of fossil-based materials – without requiring changes to equipment or processes.

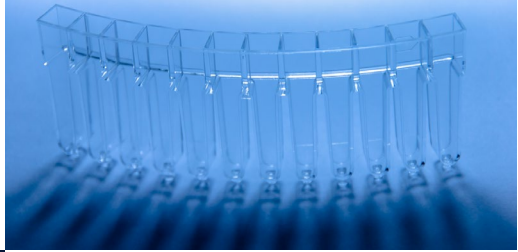
Backed by a global supply network, regulatory expertise, and certified sustainability credentials, we partner with customers to bring innovative, future-ready healthcare solutions to market efficiently and responsibly.

To learn more about our ECO product portfolio, visit the Sustainability section on our website:
<https://www.ineos.com/businesses/ineos-styrolution/sustainability/>



Healthcare packages – designed to meet customer requirements

Customer requirements

FULL SERVICE HD (RISK CLASS 1 & 2)	ESSENTIAL HD (RISK CLASS 1 & 2)	MEDICAL HOUSING (RISK CLASS 1 & 2)	STANDARD FOOD CONTACT (RISK CLASS 1)
			
✓ Regulatory statements on Food Contact, MDR, USP class VI, ISO 10993-4 & ISO 10993-5 ✓ Up to 36 months NoC, with signed long term supply contract ✓ Locked formulations as defined in the drug master file (DMF) ✓ Enhanced quality control processes	✓ Regulatory statements on Food Contact, MDR, USP class VI, ISO 10993-4 & ISO 10993-5 ✓ Up to 12 months NoC, with signed long term supply contract ✓ Locked formulations as defined in the drug master file (DMF)	✓ Regulatory statements on Food Contact, MDR, ISO 10993-5 & ISO 10993-10 ✓ Up to 12 months NOC, with signed long term supply contract	✓ Regulatory statements on Food Contact
NOVODUR® HD & LUSTRAN®	NAS®	LURAN® S MED	STYROLUTION® PS
TERLUX® HD	ZYLAR® & CLEARBLEND®		TERLURAN®
LURAN® HD	STYROFLEX®		NOVODUR®
	STYROLUX®		TERLUX®
	K-RESIN®		LURAN®

ISO 10993-4 Interaction with blood; ISO 10993-5 Cytotoxicity (cell damage);
ISO 10993-10 Hypersensitivity (skin irritation)

NoC: Notification of Change; MDR: Medical Device Regulation; DMF: Drug Master File

Building a clean, safe path to good health

Styrenics applications

Whether for vaccines, transfusions or nebulizers, the healthcare applications of styrenics are plentiful. It is not just cleanliness and safety that make styrenics attractive for healthcare solutions providers. They also exhibit great strength and resistance, easy processability, the highest quality standards and an attractive appearance. Here is a sampling:

IV systems & fluid delivery

- IV tubing, lumen-, co-ex tubes
- IV bags
- IV drip chambers
- Spikes
- Connectors (rigid/ flexible)
- Stopcocks
- Roller clamps
- Dialysers
- Blood filters and reservoirs

Labware

- Titer plates, petri dishes, pipettes
- Sample spoons
- Cell growth bottles
- Cuvettes
- Centrifuge tubes, caps and closures
- Anesthesia-blood analysis trays
- Diagnostic test kits
- Retinal surgery cassette

Respiratory & drug delivery

- Inhalers
- Sleep apnea devices
- Insulin pens
- Insulin pumps
- Injection pens
- Needleless injection devices
- Syringes
- Nebulisers

Diagnostic equipment

- Medical monitoring
- Diagnostic systems
- CT scanners
- Blood pressure monitors
- Thermometers, pulse oximeters
- Fitness devices
- Glucometers, AED
- Ultrasound instruments
- Wireless-remote devices

Medical packaging

- Medical trays
- Pouches
- Blisters
- Films
- Overwraps
- Film/ multi layer film applications

Surgical instruments

- Handle grips
- Vaginal speculums
- Electro surgical pencils
- Trocars
- Arthroscopes
- Endoscopes
- Microlaparoscopy instruments
- Anesthesia devices
- Endoscopy tube and parts
- Prosthesis



Our product portfolio for the Healthcare industry

TRANSPARENT			
STIFFNESS	For medical use Dimensional stability Heat resistance Chemical resistance	LURAN® HD	SAN
	For medical use Superior clarity	NAS®	SMMA
IMPACT RESISTANCE	For medical use Chemical resistance Rigidity Stiffness	TERLUX® HD	MABS
	Processability Toughness Alcohol resistance	ZYLAR® CLEARBLEND®	MBS
	Toughness Processability PS modifier	STYROLUX® K-RESIN®	SBC
	S-TPE Flowability Impact modifier	STYROFLEX®	SBC (S-TPE)

OPAQUE			
GENERAL PURPOSE (ABS)	For medical use Chemical resistance Flowability High gloss	NOVODUR® HD LUSTRAN®	ABS
HIGH IMPACT (ASA)	For medical use Impact strength Flowability Chemical resistance (ESCR) Dimensional stability Food contact (FC)	LURAN® S MED 797S FC	ASA
UV RESISTANCE (ASA)	For medical use Impact strength Flowability Chemical resistance (ESCR) Heat resistance Dimensional stability	LURAN® S MED 797S SPF30	ASA



Many of our grades are available as ECO versions, helping you meet your sustainability goals without compromising on quality. For custom solutions or specific project needs, reach out to your INEOS Styrolution contact – we're here to help you create the perfect product.

Novodur® HD & Lustran® (ABS)

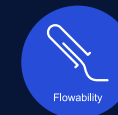
Full Service HD (Risk Class 1 & 2)



INEOS Styrolution's Full Service Novodur® HD and Lustran® grades of acrylonitrile butadiene styrene (ABS) resins offer an optimal balance of physical and mechanical properties. These grades are specifically designed to exhibit exceptional chemical resistance to common healthcare cleaners and disinfectants. Our products are available in many regulatory compliant colours.



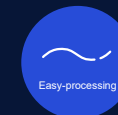
Key properties



Flowability



Self colouring



Good processability



Laser marking



Sterilisation

Additional features

- Reliability – consistent products proven in numerous medical devices
- Excellent property retention after gamma-radiation, E-beam, NO₂, or EtO sterilisation
- Great ESCR to common healthcare disinfectants and cleaners, including bleach, betadine
- Bondability – ultrasonic, solvent, adhesive
- Flexural modulus and flexural strength
- Tensile modulus (good stiffness and strength)

Novodur® HD

Lustran®

Application fields

- Inhalers
- Instrument handles
- Drug delivery housings
- Insulin pens
- Auto injector pens

Novodur® HD ABS and Lustran® ABS are part of the INEOS Styrolution Full Service HD Package which can be offered with Notification of Change (NoC) term up to 36 months when signing a long term supply contract. Full regulatory compliance (USP class VI, ISO 10993, food contact statements, Drug Master File (DMF)) can be provided with this package. Furthermore, Novodur® HD ABS grades are available in many regulatory compliant colours.

For more information please contact your sales representative.

Property	Test method	Unit	Novodur® HD M203FC	Novodur® HD 15	Lustran® 348
Producing region			EMEA	EMEA	Americas
Melt volume-flow rate MVR (220 °C/10 kg)	ISO 1133	cm³/10 min	31	15	18
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	2400	2300	2300
Flexural strength (23 °C)	ISO 178	MPa	70	-	
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	16	14	22
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m²	110	170	
Izod notched impact strength (23 °C)	ISO 180-1A	kJ/m²	16	16	26
Ball indentation hardness (H 358/ 30)	ISO 2039-1	MPa	107	102	
Vicat softening temperature VST B 50	ISO 306	°C	99	100	97
Max. ECO content available			BC100	-	*

* ECO content can vary in other producing regions. Please consult local account representative.



PCF savings
up to -105%.

PCF statements available on request.
PCF calculated with our TÜV Rheinland–certified PCF tool.
Figures are based on the data and methods valid at the time of calculation. We disclaim all warranties and liability; updated figures may vary slightly as data is refreshed.

Terlux® HD (MABS)

Full Service HD (Risk Class 1 & 2)

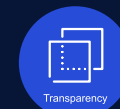


INEOS Styrolution's Terlux® HD (MABS) products stand out for their balanced toughness-to-stiffness ratio, excellent ESCR performance, and high optical clarity. This combination of properties and ease of processing makes Terlux® HD an optimal choice for upscale and design-oriented healthcare applications.

Additional features

- Reliability – consistent products proven in numerous medical devices
- Good mechanical strength and stiffness
- Excellent chemical resistance and good environmental stress cracking resistance (ESCR)
- Outstanding surface quality, excellent feel and appearance
- Thermal stability
- Good solvent bonding to PVC

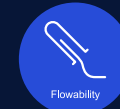
Key properties



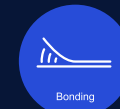
Transparency



Chemical resistance



Flowability



Bonding



Sterilisation

Application fields

- Connectors
- Transparent housings
- Stopcocks
- Valves
- Mouthpieces

Terlux® HD belongs to the INEOS Styrolution Full Service HD Package which can be offered with Notification of Change (NoC) term up to 36 months when signing a long term supply contract. Full regulatory compliance (USP class VI, ISO 10993, food contact statement, Drug Master File (DMF)) can be provided with this package.

For more information please contact your sales representative.

Property	Test method	Unit	Terlux® HD 2812 (Easy flow)	Terlux® HD 2802 (Standard flow)
Producing region			EMEA	EMEA
Melt volume-flow rate MVR (220 °C/10 kg)	ISO 1133	cm³/10 min	8	2
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	1900	2000
Tensile strain at break (23 °C)	ISO 527	%	4	4
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	5	5
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m²	110	120
Izod notched impact strength (23 °C)	ISO 180-1A	kJ/m²	7	7
Vicat softening temperature VST B 50	ISO 306	°C	87	93
Max. ECO content available			BC25	BC25



PCF savings up to -22%.

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Luran[®] HD (SAN)

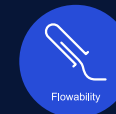
Full Service HD (Risk Class 1 & 2)

Luran[®] HD 20 is a specialised, easy-flow SAN grade tailored for the medical market. It is particularly well-suited for mouldings with very thin walls and/ or challenging flow length-to-wall ratios. This material offers exceptional transparency and a light intrinsic colour. Food contact compliance statements are available upon request.

Key properties



Chemical resistance



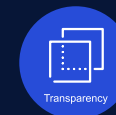
High flowability



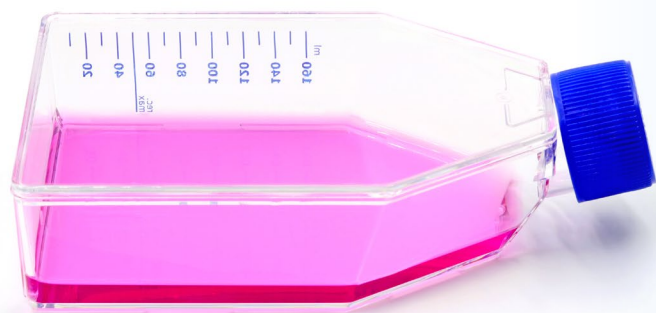
High heat resistance



Easy to mould



Excellent transparency



Additional features

- Reliability – consistent products proven in numerous medical devices
- Excellent property retention after gamma radiation, E-beam, NO₂, or EtO sterilisation

Luran® HD

Application fields

- Labware
- Urine containers
- Vacuum bottles
- Nebulizer housings
- Specimen holders

Luran® HD (SAN) belongs to the INEOS Styrolution Full Service HD Package which can be offered with Notification of Change (NoC) term up to 36 months when signing a long term supply contract. Full regulatory compliance (USP class VI, ISO 10993, food contact statement, Drug Master File (DMF)) can be provided with this package.

For more information please contact your sales representative.

Property	Test method	Unit	Luran® HD 20
Producing region			EMEA
Melt volume-flow rate MVR (220 °C/10 kg)	ISO 1133	cm³/10 min	22
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	3700
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	2
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m²	16
Izod notched impact strength (23 °C)	ISO 180-1A	kJ/m²	2
Vicat softening temperature VST B 50	ISO 306	°C	106
Max. ECO content available			BC70



PCF savings
up to -76%.

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NAS[®] (SMMA)

Essential HD (Risk Class 1 & 2)

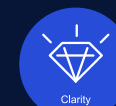


INEOS Styrolution's best-in-class transparent styrene-methyl-methacrylate (SMMA) copolymers are the premium choice for applications requiring a strong, stiff, and water-clear material. NAS[®] is hydrophobic and offers excellent thermal stability along with superior alcohol resistance.

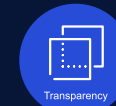
Additional features

- Hydrophobic (no pre-drying)
- Virtually no moulded-in stress
- Outstanding property retention after sterilisation, EtO, Gamma, E-beam, NO₂
- Clarity and colour consistency/ neutrality

Key properties



Extreme clarity



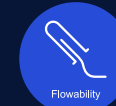
Excellent transparency



High chemical resistance to alcohols



Good heat resistance



Excellent flow properties

Application fields

- Filters
- Connectors
- Adapters
- Nebuliser housings
- Specimen holders

NAS® is a part of the Essential HD Package that can be provided with food contact statements, USP Class VI, ISO 10993 compliance and a Drug Master File (DMF). Notification of Change (NoC) term up to 12 months can also be provided when signing a long term supply contract.

For more information please contact your sales representative.

Property	Test method	Unit	NAS® 21	NAS® 30	NAS® 90
Producing region			Americas EMEA	Americas EMEA	Americas
Melt volume-flow rate MVR (220 °C/10 kg)	ISO 1133	cm ³ /10 min	24	30	16
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	3300	3300	3100
Tensile strain at break (23 °C)	ISO 527	%	2.5	2.5	2.3
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m ²	1.5	1.5	1.5
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m ²	12	12	13
Izod notched impact strength (23 °C)	ISO 180-1A	kJ/m ²	2.5	2.5	2.5
Vicat softening temperature VST B 50	ISO 306	°C	98	98	90
Max. ECO content available			BC70 (EMEA)*	BC70 (EMEA)*	*

* ECO content can vary in other producing regions. Please consult local account representative.



PCF savings
up to -74%.

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PCF calculated with our TÜV Rheinland–certified PCF tool.
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Zylar® & Clearblend® (MBS)

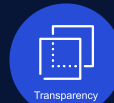
Essential HD (Risk class 1 & 2)



Additional features

- Lower moisture retention means little or no pre-drying
- Low processing temperatures
- Outstanding property retention after gamma, E-beam, NO₂, or EtO sterilisation
- Good chemical resistance: particularly to many detergents, cleaning solutions, and alcohols

Key properties



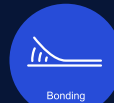
Transparency

Excellent transparency



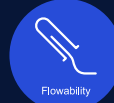
Stress cracking resistance

Environmental stress cracking resistance



Bonding

Bonding



Flowability

Excellent flow properties



Sterilisation

Sterilisation



INEOS Styrolution's clear impact-modified styrene-acrylic (MBS) copolymers deliver practical toughness, outstanding clarity, and superior processing performance. In spiral flow tests, Zylar® and Clearblend® resins achieve the same flow distances as polycarbonate but at significantly lower temperatures, resulting in higher productivity, reduced energy consumption, and minimal moulded-in stress.

Application fields

- Transparent reservoirs
- Housings
- Urine containers
- Connectors
- Mouth pieces
- Enclosures

Zylar® is a part of the Essential HD Package that can be provided with food contact statements, USP Class VI, ISO 10993 compliance and a Drug Master File (DMF). Notification of Change (NoC) term up to 12 months can also be offered when signing a long term supply contract.

For more information please contact your sales representative.

Property	Test method	Unit	Zylar® 245	Zylar® 550	Zylar® 631	Zylar® 650	Zylar® 960
Producing region			EMEA	EMEA	Americas	All	Americas EMEA
Melt volume-flow rate MVR (200 °C/5 kg)	ISO 1133	cm ³ /10 min	4.5	5.0	5.8	4.0	6.0
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	2300	2100	2120	2100	1650
Tensile strain at break (23 °C)	ISO 527	%	20	50	-	40	120
Tensile stress at yield (23 °C)	ISO 527	MPa	47	28	-	26	28
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m ²	2	4	3.4	2	16
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m ²	15	no break	no break	no break	no break
Vicat softening temperature VST B 50	ISO 306	°C	78	73	74	76	60
Max. ECO content available			BC80 (EMEA)	BC40 (EMEA)	*	BC30 (EMEA)*	BC90 (EMEA)*



* ECO content can vary in other producing regions. Please consult local account representative



PCF savings up to -93%.

PCF statements available on request. PCF calculated with our TÜV Rheinland–certified PCF tool. Figures are based on the data and methods valid at the time of calculation. We disclaim all warranties and liability; updated figures may vary slightly as data is refreshed.

Application fields

- Transparent reservoirs
- Housings
- Urine containers
- Connectors
- Mouth pieces
- Enclosures

Clearblend® is a part of the Essential HD Package that can be provided with food contact statements, USP Class VI, ISO 10993 compliance and a Drug Master File (DMF). Notification of Change (NoC) term up to 12 months can also be offered when signing a long term supply contract.

For more information please contact your sales representative.

Property	Test method	Unit	Clearblend® 145	Clearblend® 165
Producing region			Americas	Americas
Melt volume-flow rate MVR (200 °C/5 kg)	ISO 1133	cm³/10 min	3.5	5.0
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	2240	1520
Tensile strain at break (23 °C)	ISO 527	%	40.0	50.0
Tensile stress at yield (23 °C)	ISO 527	MPa	28	21
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	2	14
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m²	40	no break
Vicat softening temperature VST B 50	ISO 306	°C	82	67
Max. ECO content available			*	*

* ECO content can vary in other producing regions. Please consult local account representative.

Styroflex[®] (SBC)

Essential HD (Risk Class 1 & 2)

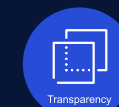


Styroflex[®] is INEOS Styrolution's uniquely designed styrene-butadiene block copolymer (SBC) with the properties of a thermoplastic elastomer (S-TPE), combining exceptional transparency, elasticity, and superior processability. With outstanding thermal stability, Styroflex[®] is ideal for both film extrusion and injection moulding, making it a versatile choice for a wide range of applications.

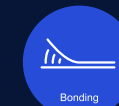
Additional features

- Rubber-like mechanics
- Extremely high tear and perforation resistance
- Low density ($\sim 1002 \text{ kg/m}^3$)
- High oxygen and water vapor permeability
- Toughness modifier and compatibiliser (improved mechanics)
- Higher polarity due to randomised soft phase: Good compatibility with other polymers and great compatibility with styrenics as well as polyolefins

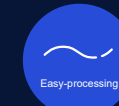
Key properties



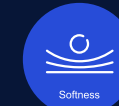
Excellent transparency



Excellent bonding to other polymers



Good processability



Softness



Flexibility

Application fields

- Drip chambers*
- Catheters*
- Connectors
- Tubes*
- Collection bags
- Infusion bags*
- Film applications
- Soft touch (2K moulding)

* Neat or as an additive

Styroflex® is a part of the Essential HD Package that can be provided with food contact statements, USP Class VI, ISO 10993 compliance and a Drug Master File (DMF). Notification of Change (NoC) term up to 12 months can also be offered when signing a long term supply contract.

For more information please contact your sales representative.

Property	Test method	Unit	Styroflex® 2G66	Styroflex® 4G80
Producing region			EMEA	EMEA
Melt volume-flow rate MVR (200 °C/5 kg)	ISO 1133	cm³/10 min	13	18
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	120	50
Tensile strain at break (23 °C)	ISO 527	MPa	>500	>500
Tensile stress at yield (23 °C)	ISO 527-1/2	MPa	4	3
Tensile elongation at break	ISO 527-1/2	%	>500	>500
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	no break	no break
Hardness shore A	ISO 868		84	80
Max. ECO content available			BC100	BC100



PCF savings
up to -119%.

PCF statements available on request.
PCF calculated with our TÜV Rheinland–certified PCF tool.
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Styrolux[®]/ K-Resin[®] (SBC)

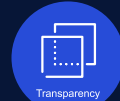
Essential HD (Risk Class 1 & 2)



Additional features

- Excellent bonding performance
- Can be used as a transparent modifier to GPPS and SMMA
- Excellent colour consistency after gamma and E-beam, sterilisation

Key properties



Transparency

Excellent transparency



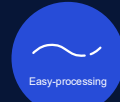
Bonding

Excellent bonding to other polymers



Flexibility

Toughness



Easy-processing

Easy processing



Low density

Low density



Styrolux[®] and K-Resin[®] are INEOS Styrolution's premium styrene-butadiene copolymers (SBC), offering exceptional transparency, impact resistance, and versatility. Known for their sparkling clarity, stiffness, and exceptional gloss, these materials are ideal for a wide range of applications, including flexible and rigid packaging, as well as injection-moulded medical devices.

Application fields

- Containers for IV and dialysis fluids
- Rigid extruded luers and containers
- Infusion drip chambers
- Labware
- Oxygen delivery equipment
- Filter housings
- Drainage containers
- Respiratory devices
- Packaging

Styrolux® is part of the Essential HD Package that can be provided with food contact statements, USP Class VI, ISO 10993 compliance and a Drug Master File (DMF). Notification of Change (NoC) term up to 12 months can also be offered when signing a long term supply contract.

For more information please contact your sales representative.

Property	Test method	Unit	Styrolux® 3G46	Styrolux® 656C	Styrolux® 684D
Producing region			Americas EMEA	Americas EMEA	Americas EMEA
Melt volume-flow rate MVR (200 °C/5 kg)	ISO 1133	cm³/10 min	12	16	11
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	1500	1600	1400
Tensile stress at yield (23 °C)	ISO 527-1/2	MPa	27	35	26
Tensile elongation at break	ISO 527-1/2	%	70	20	160
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	1.5	1.2	2
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m²	no break	20	no break
Hardness shore D	ISO 868		58	70	63
Vicat softening temperature VST B 50	ISO 306	°C	55	60	55
Max. ECO content available			BC100 (EMEA)**	BC100 (EMEA)**	BC100 (EMEA)**



** ECP content can vary in other producing regions. Please consult local account representative



PCF savings up to -116%.

PCF statements available on request. PCF calculated with our TÜV Rheinland–certified PCF tool. Figures are based on the data and methods valid at the time of calculation. We disclaim all warranties and liability; updated figures may vary slightly as data is refreshed.

Application fields

- Containers for IV and dialysis fluids
- Rigid extruded luers and containers
- Infusion drip chambers
- Labware
- Oxygen delivery equipment
- Filter housings
- Drainage containers
- Respiratory devices
- Packaging

K-Resin® is part of the Essential HD Package that can be provided with food contact statements, USP Class VI, ISO 10993 compliance and a Drug Master File (DMF). Notification of Change (NoC) term up to 12 months can also be offered when signing a long term supply contract.

For more information please contact your sales representative.

Property	Test method	Unit	K-Resin® KR01	K-Resin® KR03/ 05/ DK11**
Producing region			All	All
Melt volume-flow rate MVR (200 °C/5 kg)	ISO 1133	cm³/10 min	8	7.5
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	1600	1500
Tensile stress at yield (23 °C)	ISO 527-1/2	MPa	34	25
Tensile elongation at break	ISO 527-1/2	%	10	170
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	1.5	2
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m²	20	no break
Hardness shore D	ISO 868		70	61
Vicat softening temperature VST B 50	ISO 306	°C	65	51
Max. ECO content available			BC100 (EMEA)*	BC100 (EMEA)*



* ECO content can vary in other producing regions
** Also available as E-version = wax



PCF savings
up to -113%.

PCF statements available on request.
PCF calculated with our TÜV Rheinland–certified PCF tool.
Figures are based on the data and methods valid at the time of calculation. We disclaim all warranties and liability; updated figures may vary slightly as data is refreshed.

Medical SBC Portfolio

Styrolux®

684D

- ✓ Good printability*
- ✓ Universal grade for E & IM

*NW version

3G46

- ✓ Highest transparency
- ✓ Good balance stiffness & toughness

656C

- ✓ High flow
- ✓ Highest stiffness

Styroflex®

2G66

- ✓ General purpose
- ✓ Down gauging improver
- ✓ Compatibilizer with other resins

4G80

- ✓ Tubing
- ✓ Medical devices grade
- ✓ Low viscosity
- ✓ Higher flow

KR01

- ✓ Injection molding
- ✓ Highest stiffness

KR03/E

- ✓ Injection molding
- ✓ Impact strength

K-Resin®

KR05/E

- ✓ Sheet extrusion grade
- ✓ Good for PS blends

DK11/E

- ✓ Extrusion and IM grade
- ✓ Low gels for sheet/ film

Luran[®] S MED (ASA)

Medical Housings



Luran[®] S Med 797S is INEOS Styrolution's specialised acrylonitrile styrene acrylate (ASA) grade designed for medical housings. It combines excellent chemical resistance against IPA and Ethanol, UV stability, and impact strength with superior flowability for easy injection moulding, making it a reliable choice for high-performance medical applications.



Key properties



Excellent chemical resistance



High impact strength



Superior long term UV protection



Available based on renewable feedstock

Additional features

- Regulatory compliant: ISO 10993-5 (cytotoxicity)/ 10 (hypersensitivity)
- Strong environment stress cracking resistance (ESCR)
- Notification of Change (NoC) for up to 12 months possible (with signed long term supply contract)

Luran® S MED

Application fields

- Medical housings
- Home care applications
- Blood pressure meters
- Oximeters/ Thermometers/ Glucometers
- Insulin-, and auto injection pens
- Connectors
- Filter housings

Luran® S MED, especially designed for medical device housings and casings, can be provided with regulatory statements on MDR, ISO 10993-5 & ISO 10993-10. Notification of Change (NoC) term up to 12 months can also be offered when signing a long term supply contract.

For more information please contact your sales representative.

Property	Test method	Unit	Luran® S MED 797S SPF30	Luran® S MED 797S FC
Producing region			EMEA	EMEA
Melt volume-flow rate MVR (220 °C/10 kg)	ISO 1133	cm ³ /10 min	5.5	5.5
Tensile modulus (1 mm/min)	ISO 527-1-2	MPa	2000	2000
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m ²	40	40
Charpy notched impact strength (5 °C)	ISO 179/1eA	kJ/m ²	13	13
Charpy notched impact strength (-30 °C)	ISO 179/1eA	kJ/m ²	9	9
Vicat softening temperature VST B 50	ISO 306	°C	88	88
Heat Deflection Temperature A; (annealed 4h/80°C, 1.8 MPa)	ISO 75	°C	95	95
Max. ECO content available			BC40	BC40



PCF savings
up to -48%.

PCF statements available on request.
PCF calculated with our TÜV Rheinland–certified PCF tool.
Figures are based on the data and methods valid at the time of calculation. We disclaim all warranties and liability; updated figures may vary slightly as data is refreshed.

Standard food contact package

INEOS Styrolution also provides food contact compliant grades, such as general-purpose polystyrene, high impact polystyrene, and ABS Standard grades, which can be suitable for specific medical devices and pharmaceutical packaging applications. Moreover, other specialty products are also available for Risk Class 1 applications.

Standard Food Contact Package is offered for Risk Class 1 applications where customers do not require biocompatibility data, Drug Master File entry and/or locked formulation.

PS

Styrolution® PS

MABS

Terlux®

ABS

Terluran® & Novodur®

SAN

Luran®

Please note there are some grades within the same product family (ex. Terlux®, Novodur®) that are offered with various packages. Only those specific products marked with the “HD” nomenclature come with the Full Service HD Package.



Styrolution® PS & Terluran®



Application fields

Styrolution® PS

Risk Class 1 medical devices* and pharmaceutical packaging applications such as:

- Labware
- Packaging
- Housings
- Diagnostics devices
- Petri-dishes
- Roller-clamps

Terluran®

Risk Class 1 medical devices* and pharmaceutical applications such as:

- Trays
- Diagnostics/ measuring devices (RK I)
- Sanitary appliances
- Dispensers

* Risk Class 1 and other applications reviewed and acknowledged as low risk.



Key features

GPPS:

- General purpose or crystal polystyrene
- Transparent, stiff, easy processing

HIPS:

- High impact polystyrene
- Opaque, impact resistant, easy processing

Terluran®:

- Excellent colourability, high flowability, good impact resistance
- Good heat distortion resistance
- Outstanding surface quality, excellent gloss, feel and appearance
- Amorphous structure provides excellent dimensional stability

Overview of sterilisation techniques for styrenics

Sterilisation of medical tools and devices is an absolutely essential process that is required for many medical procedures to prevent infections and contamination. Several sterilisation procedures, such as steam sterilisation, EtO treatment, NO₂, as well as beta and gamma irradiation, have been established in the industry to guarantee the complete removal of microorganisms, including bacterial and fungal spores from medical devices.

Trade name	Polymer	Gamma	E-beam	EtO	NO ₂	Steam
Terlux® HD	MABS	✓	✓	✓	✓	✗
Zylar®/ Clearblend®	MBS	✓	✓	✓	✓	✗
Styrolux®/ Styroflex®/ K-Resin®	SBC	✓	✓	✓	✓	✗
NAS®	SMMA	✓	✓	✓	✓	✗
Luran® HD	SAN	✓	✓	✓	✓	✗
Novodur® HD/ Lustran®	ABS	✓	✓	✓	✓	✗
Luran® S Med	ASA	✓	✓	✓	✓	✗



	Novodur® HD 15	Novodur® HD M203FC Natural	Lustran® 348
DMF TYPE III – Packaging Material	18858	15885	in progress
Letter of authorisation	Issued on request		
Pharmacopoeia & biocompatibility	✓ Europe: EUP, 11th Edition, Chap. 3.2.2. “Plastic Containers and Closures” ✓ Japan: JP, 18th Edition, “G7-2-162. Basic Requirements for Plastic Containers” ✓ US: USP Class VI Biological Reactivity Tests ✓ ISO 10993-4: Biocompatibility tests for in vitro hemolysis ✓ ISO 10993-5: Biocompatibility tests for cytotoxicity		
Food contact ⁽¹⁾	✓ Food contact statements available upon request		

⁽¹⁾The food contact statements for the above mentioned products can include restrictions of use. For more information, please contact your sales representative.

Please note: The above listed grades are also available in pre-colored versions, some of which are listed in the Drug Master Files and have been or are being assessed according to the above mentioned regulations. For more information, please contact your sales representative.

The above tests and classifications were recorded on test specimens of the mentioned grades to provide information on the general compatibility of the material. These do not form a specification or warranty. The biocompatibility tests and certain other tests (e.g. residual levels on moulded plaques) referred to above are not part of any continuous production control. The suitability (fit for purpose) for any specific application concerned, including observation of given limitations and toxicological thresholds according to medical, pharmaceutical and/or food contact requirements, have to be ensured on the final article by the article manufacturer.

	Terlux® HD 2802	Terlux® HD 2812	Luran® HD 20
DMF TYPE III – Packaging Material	18074	20017	21885
Letter of authorisation	Issued on request		
Pharmacopoeia & biocompatibility	✓ Europe: EUP, 11th Edition, Chap. 3.2.2. “Plastic Containers and Closures” ✓ Japan: JP, 18th Edition, “G7-2-162. Basic Requirements for Plastic Containers” ✓ US: USP Class VI Biological Reactivity Tests ✓ ISO 10993-4: Biocompatibility tests for in vitro hemolysis ✓ ISO 10993-5: Biocompatibility tests for cytotoxicity		
Food contact ⁽¹⁾	✓ Food contact statements available upon request		

⁽¹⁾The food contact statements for the above mentioned products can include restrictions of use. For more information, please contact your sales representative.

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Regulatory Compliance

Essential HD Package

	Clearblend® 145, 165	NAS® 21, 30, 90	Styrolux® 656C, 684D, 3G46	Styroflex® 2G66, 4G80	Zylar® 245, 550, 631, 650, 960	K-Resin® KR01, KR03/05/DK11
DMF TYPE III – Packaging Material	31639	29425	656C: 17772 684D: 17771 3G46: 30956	34056	30812	2406
Letter of authorisation	Issued on request					
Pharmacopoeia & biocompatibility	✓ Europe: EUP, 11th Edition, Chap. 3.2.2. “Plastic Containers and Closures” ✓ Japan: JP, 18th Edition, “G7-2-162. Basic Requirements for Plastic Containers” ✓ US: USP Class VI Biological Reactivity Tests					
Food contact ⁽¹⁾	✓ ISO 10993-4: Biocompatibility tests for in vitro hemolysis ✓ ISO 10993-5: Biocompatibility tests for cytotoxicity ✓ Food contact statements available upon request					

⁽¹⁾The food contact statements for the above mentioned products can include restrictions of use. For more information, please contact your sales representative.

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Regulatory Compliance

Medical housings

Luran® S MED 797S	
DMF TYPE III – Packaging Material	/
Letter of authorisation	/
Pharmacopoeia & biocompatibility	✓ Europe: EUP, 11th Edition, Chap. 3.2.2. “Plastic Containers and Closures” ✓ Japan: JP, 18th Edition, “G7-2-162. Basic Requirements for Plastic Containers” ✓ ISO 10993-5: Biocompatibility tests for cytotoxicity ✓ ISO 10993-10: Biocompatibility tests for hypersensitivity (skin irritation)
Food contact ⁽¹⁾	✓ Food contact statements available upon request

⁽¹⁾The food contact statements for the above mentioned products can include restrictions of use. For more information, please contact your sales representative.

Please note: The above tests and classifications were recorded on test specimens of the mentioned grades to provide information on the general compatibility of the material. These do not form a specification or warranty. The biocompatibility tests and certain other tests (e.g. residual levels on moulded plaques) referred to above are not part of any continuous production control. The suitability (fit for purpose) for any specific application concerned, including observation of given limitations and toxicological thresholds according to medical, pharmaceutical and/or food contact requirements, have to be ensured on the final article by the article manufacturer.



For further questions, please contact
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(October 2025)



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(October 2025)



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(October 2025)



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(October 2025)