## LNP\* Lubricomp\* Compound RN001S



## Europe-Africa-Middle East: DEVELOPMENTAL

## Also known as: RL4210S1 Product Reorder Name: RN001S

Lubricated Polyamide 66 injection moulding resin.

## **Property**

Tensile Stress, yield, 50 mm/min 92 MPa ISO 527   Tensile Strain, yield, 50 mm/min 3.5 % ISO 527   Tensile Strain, break, 50 mm/min 30 % ISO 527   Tensile Modulus, 1 mm/min 3200 MPa ISO 527   Flexural Stress, yield, 2 mm/min 120 MPa ISO 178   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Hardness, Rockwell R 119 - ISO 2039-2   IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 k.J/m² ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 3 k.J/m² ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 k.J/m² ISO 180/1A   Izod Impact, notched 80*10*4 sp=62mm >50 k.J/m² ISO 180/1A   Izod Impact, notched 80*10*4 sp=62mm >50 k.J/m² ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 1359-2   CTE, 23°C to 60°	TYPICAL PROPERTIES <sup>(1)</sup>			
Tensile Strain, yield, 50 mm/min 3.5 % ISO 527   Tensile Strain, break, 50 mm/min 30 % ISO 527   Tensile Modulus, 1 mm/min 3200 MPa ISO 527   Flexural Stress, yield, 2 mm/min 120 MPa ISO 527   Flexural Stress, yield, 2 mm/min 120 MPa ISO 178   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Hardness, Rockwell R 119 - ISO 2039-2   IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 k.J/m² ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 2 k.J/m² ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 k.J/m² ISO 180/1A   Izod Impact, notched 80*10*4 sp=62mm >50 k.J/m² ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, flow	MECHANICAL	Value	Unit	Standard
Tensile Strain, break, 50 mm/min 30 % ISO 527   Tensile Brain, break, 50 mm/min 3200 MPa ISO 527   Tensile Modulus, 1 mm/min 3200 MPa ISO 527   Flexural Stress, yield, 2 mm/min 120 MPa ISO 527   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Hardness, Rockwell R 119 - ISO 2039-2   IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 +23°C 2 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 +23°C 2 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 +23°C 2 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 +23°C 2 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 sp=62mm >550 kJ/m2 ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, f	Tensile Stress, yield, 50 mm/min	92	MPa	ISO 527
Tensile Modulus, 1 mm/min 3200 MPa ISO 527   Flexural Stress, yield, 2 mm/min 120 MPa ISO 178   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Hardness, Rockwell R 119 - ISO 2039-2   IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 KJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 +23°C 2 KJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 +23°C 2 KJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 +20°C 2 KJ/m² ISO 180/1A   Izod Impact, notche 80*10*4 +20°C 2 KJ/m² ISO 180/1A   Izod Impact, notche 80*10*4 sp=62mm >50 KJ/m² ISO 180/1A   Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 KJ/m² ISO 1739/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   Vica	Tensile Strain, yield, 50 mm/min	3.5	%	ISO 527
Flexural Stress, yield, 2 mm/min 120 MPa ISO 178   Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Hardness, Rockwell R 119 - ISO 2039-2   IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 kJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 3 kJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 kJ/m² ISO 179/1eU   Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 kJ/m² ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage o	Tensile Strain, break, 50 mm/min	30	%	ISO 527
Flexural Modulus, 2 mm/min 3300 MPa ISO 178   Hardness, Rockwell R 119 - ISO 2039-2   IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 kJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 3 kJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 kJ/m² ISO 180/1A   Izod Impact, notched 80*10*4 sp=62mm >50 kJ/m² ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Be   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat)	Tensile Modulus, 1 mm/min	3200	MPa	ISO 527
Hardness, Rockwell R 119 - ISO 2039-2   IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 3 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 kJ/m2 ISO 180/1A   Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 kJ/m2 ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 1359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 1306   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Te	Flexural Stress, yield, 2 mm/min	120	MPa	ISO 178
IMPACT Value Unit Standard   Izod Impact, notched 80*10*4 +23°C 4 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 3 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 3 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 kJ/m2 ISO 180/1A   Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 kJ/m2 ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm3 ISO 1183   Wa	Flexural Modulus, 2 mm/min	3300	MPa	ISO 178
Izod Impact, notched 80*10*4 +23°C 4 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 3 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 kJ/m2 ISO 180/1A   Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 kJ/m2 ISO 179/1eU   THERMAL Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.6 - 2 % ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 2183   ILAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4)	Hardness, Rockwell R	119	-	ISO 2039-2
Instruction 3 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -20°C 2 kJ/m2 ISO 180/1A   Izod Impact, notched 80*10*4 -40°C 2 kJ/m2 ISO 180/1A   Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 kJ/m2 ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Fla	ІМРАСТ	Value	Unit	Standard
Izod Impact, notched 80*10*4 -40°C 2 kJ/m2 ISO 180/1A   Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 kJ/m2 ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm >50 kJ/m2 ISO 179/1eU   THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 7.8E-05 1/°C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	Izod Impact, notched 80*10*4 -20°C	3	kJ/m²	ISO 180/1A
THERMAL Value Unit Standard   CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	Izod Impact, notched 80*10*4 -40°C	2	kJ/m²	ISO 180/1A
CTE, 23°C to 60°C, flow 7.8E-05 1/°C ISO 11359-2   CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	>50	kJ/m²	ISO 179/1eU
CTE, 23°C to 60°C, xflow 7.8E-05 1/°C ISO 11359-2   Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/120 252 °C ISO 306   HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	CTE, 23°C to 60°C, flow	7.8E-05	1/°C	ISO 11359-2
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm 230 °C ISO 75/Be   HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm 90 °C ISO 75/Ae   PHYSICAL Value Unit Standard   Mold Shrinkage on Tensile Bar, flow (2) 1.6 - 2 % SABIC Method   Density 1.15 g/cm³ ISO 1183   Water Absorption, (23°C/sat) 8.5 % ISO 62   FLAME CHARACTERISTICS Value Unit Standard   UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	CTE, 23°C to 60°C, xflow	7.8E-05	1/°C	ISO 11359-2
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm90°CISO 75/AePHYSICALValueUnitStandardMold Shrinkage on Tensile Bar, flow (2)1.6 - 2%SABIC MethodDensity1.15g/cm³ISO 1183Water Absorption, (23°C/sat)8.5%ISO 62FLAME CHARACTERISTICSValueUnitStandardUL Compliant, 94HB Flame Class Rating (3)(4)1.6mmUL 94 by GE	Vicat Softening Temp, Rate B/120	252	°C	ISO 306
PHYSICALValueUnitStandardMold Shrinkage on Tensile Bar, flow (2)1.6 - 2%SABIC MethodDensity1.15g/cm³ISO 1183Water Absorption, (23°C/sat)8.5%ISO 62FLAME CHARACTERISTICSValueUnitStandardUL Compliant, 94HB Flame Class Rating (3)(4)1.6mmUL 94 by GE	HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	230	°C	ISO 75/Be
Mold Shrinkage on Tensile Bar, flow (2)1.6 - 2%SABIC MethodDensity1.15g/cm³ISO 1183Water Absorption, (23°C/sat)8.5%ISO 62ValueUnitStandardUL Compliant, 94HB Flame Class Rating (3)(4)1.6mmUL 94 by GE	HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	90	°C	ISO 75/Ae
Density1.15g/cm³ISO 1183Water Absorption, (23°C/sat)8.5%ISO 62FLAME CHARACTERISTICSValueUnitStandardUL Compliant, 94HB Flame Class Rating (3)(4)1.6mmUL 94 by GE	PHYSICAL	Value	Unit	Standard
Water Absorption, (23°C/sat)8.5%ISO 62FLAME CHARACTERISTICSValueUnitStandardUL Compliant, 94HB Flame Class Rating (3)(4)1.6mmUL 94 by GE	Mold Shrinkage on Tensile Bar, flow (2)	1.6 - 2	%	SABIC Method
FLAME CHARACTERISTICSValueUnitStandardUL Compliant, 94HB Flame Class Rating (3)(4)1.6mmUL 94 by GE	Density	1.15	g/cm <sup>3</sup>	ISO 1183
UL Compliant, 94HB Flame Class Rating (3)(4) 1.6 mm UL 94 by GE	Water Absorption, (23°C/sat)	8.5	%	ISO 62
	FLAME CHARACTERISTICS	Value	Unit	Standard
Oxygen Index (LOI) 26 % ISO 4589	UL Compliant, 94HB Flame Class Rating (3)(4)	1.6	mm	UL 94 by GE
	Oxygen Index (LOI)	26	%	ISO 4589

Processing

Parameter		
Injection Molding	Value	Unit
Drying Temperature	75 - 85	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.2	%
Melt Temperature	260 - 280	°C
Nozzle Temperature	250 - 270	°C
Front - Zone 3 Temperature	260 - 280	°C

Middle - Zone 2 Temperature	260 - 280	°C
Rear - Zone 1 Temperature	260 - 280	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	70 - 90	°C

Source GMD, last updated:02/11/2003

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR (LOCAL SALES OFFICE) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

Disclaimer : All information, recommendation or advice given by SABIC Innovative Plastics, or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedures in effect. Each user of the products shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its own particular purpose. Because actual use of the products by the user is beyond the control of SABIC Innovative Plastics Company, its subsidiaries and affiliates, such use is in the exclusive responsibility of the user. SABIC Innovative Plastics Company, its subsidiaries and affiliates cannot be held responsible respectively liable for any loss incurred through incorrect or faulty use of the products. Information, recommendations and/or advice are neither made to infringe on any patents, nor to grant a license under any patent or intellectual property right of SABIC Innovative Plastics Company or any of its subsidiaries or faulty and of the subsidiaries or affiliated companies, nor to grant the right to file for any patent protection.

\* LNP is a trademark of the SABIC Innovative Plastics Company

\* Lubricomp is a trademark of the SABIC Innovative Plastics Company

© 1997-2008 SABIC Innovative Plastics Company.All rights reserved