

Cariflex® Polyisoprene Rubber

Cariflex polyisoprene rubber products (often abbreviated as Cariflex IR) are produced via anionic polymerization by Kraton Polymers in Belpre, Ohio. The anionic polymerization process results in linear polyisoprene chains with a narrow molecular weight distribution and an extremely low gel content. The Cariflex polyisoprene grades are of the highest purity and are suitable for health care applications.

Cariflex IR products are supplied in 25-kg bales (55 pounds) wrapped in polyethylene film, and packed in a wooden crate of approximately 1 ton each.

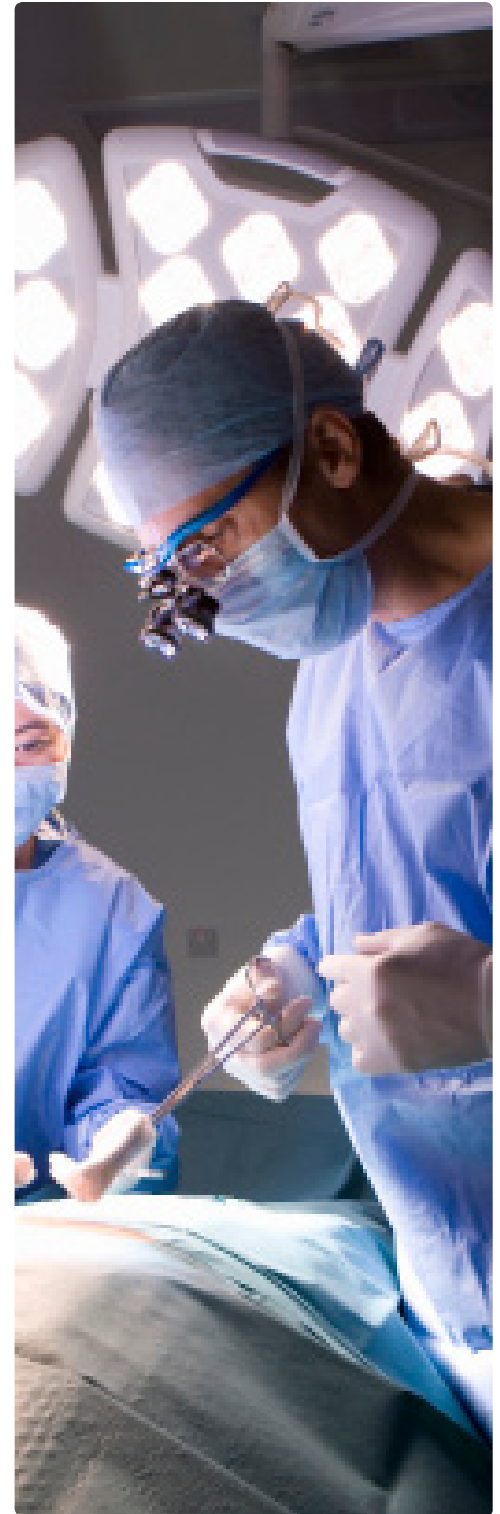
Table 1: Cariflex IR Grades - sales specification¹

	IR0307	IR0310
Characteristics/applications	Clear grade	Easy processing version of IR0307
Cis-1,4 content (%)	≥ 90	≥ 90
Volatile matter (% max)	≤ 0.5	≤ 0.5
Total ash (% max)	≤ 0.1	≤ 0.1
Stabiliser ² (% mass)	0.06 - 0.12	0.1 - 0.3
Limiting viscosity number (dl/g)	6.7 - 9.2	6.5 - 9.5
Mooney viscosity ³ , MU	N/A ⁴	40 - 50

1. Test methods – see relevant grade data sheets
2. Non-staining stabilizer
3. MML 1 + 4 (100 °C)
4. This grade is specified by limiting viscosity number only

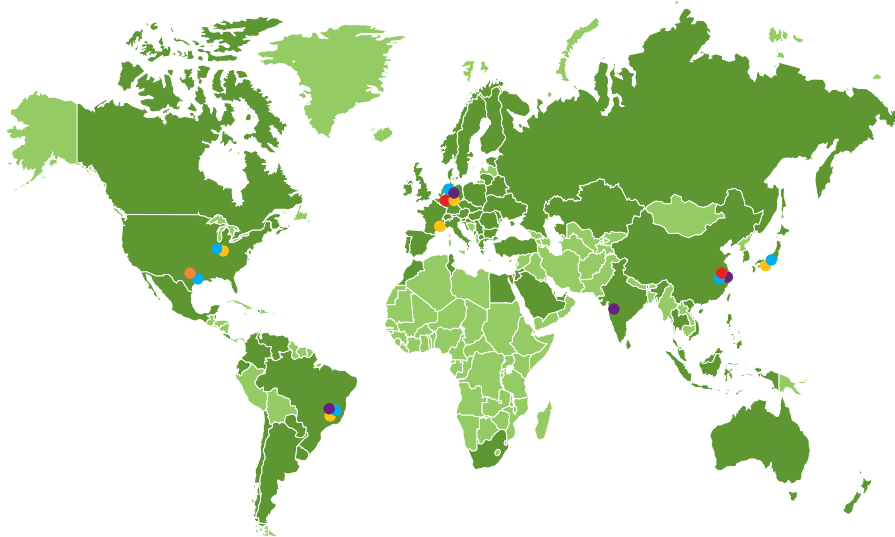
Table 2: Comparison between Cariflex IR, polyisoprene produced in 'Ziegler-type' Process, and Natural Rubber (NR)

	Cariflex IR	Ziegler IR	NR
1,4-cis content (%w)	91	> 96	> 98
1,4-trans content (%w)	1.5	0.5	1.0
3,4-vinyl content (%w)	6.5	3.5	< 2
Macrostructure	linear	branched	branched
Mw distribution	narrow	broad	very broad
Green strength	low/medium	medium	high
Gel content	zero	medium	high
Ash	low	medium	high
Trace metals (ppm)	<70	400 - 3,000 (inc. Al)	~1,000
LVN (dl/g)	6 -10	2.5 - 4.5	6 - 7
Mw (kg/mol)	2,000	1,000	2,000
Mooney visc. (MU)	40 - 80	60 - 90	< 120
Flow (of compound)	excellent	good	medium/good
Color	white/clear	yellow/amber	dark
Smell	very low/low	low/medium	variable



Company Profile

Kraton Performance Polymers, Inc. is a leading global producer of engineered polymers used to enhance the performance of products that touch virtually every aspect of our lives. The original inventor of styrenic block copolymer (SBC) chemistry in the 1960s, Kraton has a history of innovation dating back more than 50 years. Used in a myriad of applications, Kraton adds utility, value and customer appeal to products ranging from adhesives and coatings, paving and roofing to personal care items, medical supplies, electronic and automotive components. Kraton offers its products to a diverse group of more than 800 customers in over 60 countries worldwide. Dedicated to “Giving Innovators Their Edge,” we also collaborate with manufacturers on custom solutions to specific needs.



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- Manufacturing Facility
- Technical Service
- Customer Service

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