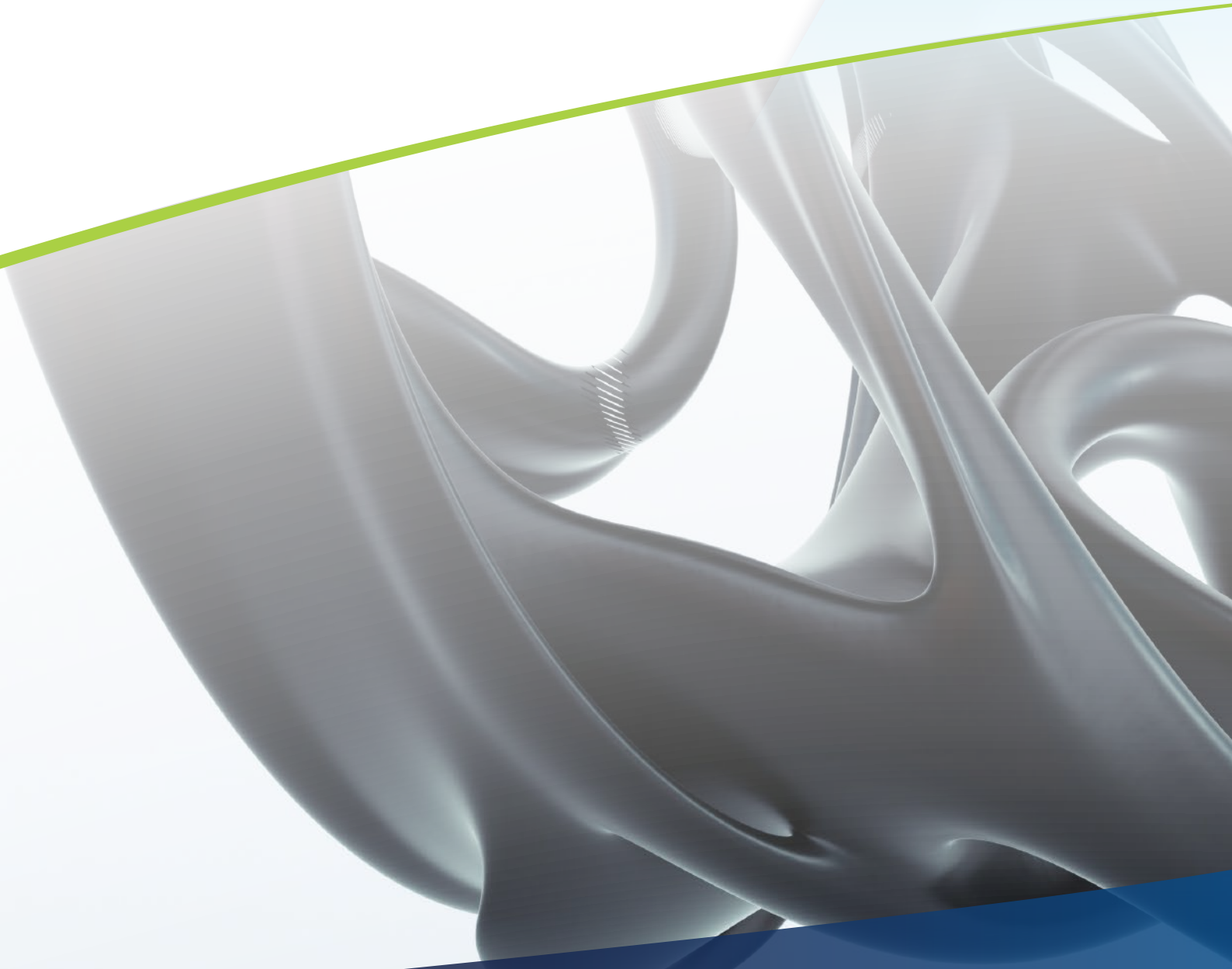
SMAC
Groupe MontBlanc Technologies

MATERIAL SCIENCE, DEVELOPED MATERIALS AND PROCESSED ELASTOMERS



Make your mission a success

MATERIAL SCIENCE

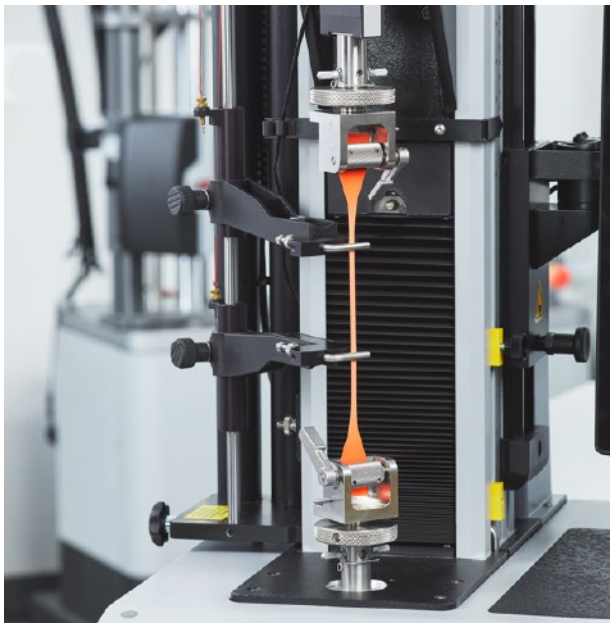
We develop new highly innovative solutions for you by placing an emphasis on the formulation, the blending and the shaping of elastomers by employing modern measuring methods and calculation processes.

Our material engineering team is highly committed to your projects and developments to write the future of our collaboration.

YOUR APPLICABLE SOLUTIONS

The relevance of SMAC solutions is based on a proven process with one unique goal: "customer satisfaction".

Whatever your application area is, from Aviation, Defense & Space, to Racing & Sports, Healthcare, Mobility and Energy market segments, we take time to identify your sealing, noise, vibration or shock challenge with the sole purpose of building the most suitable solution for your project and target needs.



The company operates its expertise within a vertically integrated process from Research & Development, through Material Science and Solution Development until serialized manufacturing and testing of qualified solution.

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MATERIALS FORMULATED AND DEVELOPED BY SMAC

SMACTANE, SMACSIL & SMACSTIC viscoelastic materials have been developed by SMAC for specific applications and represent SMAC's core capabilities in formulation of high-performance rubber blending to ensure compliance to meet your requirements in severe environments.

	MECHANICAL PROPERTIES	SPECIFIC PROPERTIES			ENVIRONMENTAL STABILITY				YOUR APPLICATION AREAS					MATERIAL			ASSEMBLING
	Traction / Tearing	Dielectric strength	Damping	Outgassing	Oils & hydrocarbons	Temperature dependency	Airborne agents (O_2, O_3, UV)	Radiation	Aeronautic	Defense	Space	Racing & Sports	Oil & Gas	Specific features	Hardness ShA	Reference	Bonding
SMACTANE®	4	NA	5	NA	2	3	4	NA	✔	✔				Damping at ambiant temperature	[40-80]	SMACTANE® ST	3
SMACTANE®	4	NA	5	NA	2	3	4	NA	✔	✔				Damping at low temperature	50	SMACTANE® BT	3
SMACTANE®	4	NA	5	NA	2	3	4	NA	✔	✔				Damping at high temperature	[30/40]	SMACTANE® HT	3
SMACTANE®	5	NA	3	NA	2	3	4	NA	✔	✔		✔		Outstanding mechanical strength (low hysteresis)	[40-85]	SMACTANE® «RACE»	3
SMACTANE®	4	NA	5	5	2	3	4	4	✔	✔	✔			Material compliant to ECSS-Q-ST-70-02C (outgassing)	[40-60]	SMACTANE® SP	3
SMACTANE®	4	NA	4	NA	1	3	2	NA	✔	✔				Damping at low temperature	50	SMACTANE® EX	5
SMACSIL®	4	NA	3	NA	3	5	5	NA	✔	✔	✔			Maintained properties in the range [-30°C; +180°C] High resilience & elasticity Material compliant to ECSS-Q-ST-70-02C (outgassing)	[35-50]	SMACSIL® LTS	5
SMACSIL®	3	NA	3	NA	3	5	5	NA	✔	✔	✔			Resistance to very low temperatures (-100°C) Material compliant to ECSS-Q-ST-70-02C (outgassing)	[25-70]	SMACSIL® ST	4
SMACSIL®	3	NA	5	5	3	5	5	5	✔	✔	✔			Material compliant to ECSS-Q-ST-70-02C (outgassing)	[30-75]	SMACSIL® VHD	3
SMACSIL®	3	4	1	NA	3	5	5	NA	✔	✔				Material compliant to NF L 17- 250/ EN 2259 Airborne agents compliance Good dielectric properties	[50/70]	50DX x=[5/7]	3
SMACSIL®	3	4	3	NA	5	5	5	NA	✔	✔			✔	Use in extreme temperature conditions Resistance to petroleum fluids, hydraulics, fuels, etc.	[40-85]	SMACSIL® Fluorinated	3
SMACSTIC	5	NA	3	NA	1	4	1	NA	✔	✔				Damping in a very large temperature range [-80°C; +80°C]	[35-80]	SMACSTIC VHD	5
SMACSTIC	5	NA	2	NA	1	2	1	NA	✔	✔				Coloured material Very good mechanical properties	[40-80]	SMACSTIC ST	5

CORRESPONDANCE TABLE									
1	Poor	2	Fair	3	Average	4	Good	5	Excellent

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MATERIALS PROCESSED BY SMAC

From Aeronautics approved materials to Oil & Gas & underwater compatible formulas, SMAC implements following compounds to manufacture your solutions :

MECHANICAL PROPERTIES	SPECIFIC PROPERTIES			ENVIRONMENTAL STABILITY				YOUR APPLICATION AREAS					MATERIAL			ASSEMBLING
Traction / Tearing	Dielectric strength	Damping	Outgassing	Oils & hydrocarbons	Temperature dependency	Airborne agents (O_2, O_3, UV)	Radiation	Aeronautic	Defense	Space	Racing & Sports	Oil & Gas	Specific features	Hardness ShA	Reference	Bonding
3	4	1	NA	3	5	5	NA	✔	✔				Material compliant to NF L 17- 250/ EN 2259 Airborne agents resistance Good dielectric properties	[50/70]	50DX x=[5/7]	3
4	NA	1	NA	4	3	3	NA	✔	✔				Airborne agents resistance	[30-90]	Polychloroprene ST	5
4	NA	1	NA	4	3	3	NA	✔	✔			✔	Material compliant to NF L 17-131 Airborne agents resistance Petroleum fluids resistance Operating temperature range [-40°C; +100°C]	[40-80]	31BX x=[4-8]	5
2	NA	1	NA	4	3	3	NA	✔	✔				Extrudable compounds	[40-80]	Polychloroprene Extrusion	5
4	4	1	NA	4	3	3	NA	✔	✔				Good dielectric strength	[50-70]	Polychloroprene Insulated	5
4	NA	1	NA	4	3	3	NA	✔	✔				Excellent bonding between cured compounds	[30-60]	Polychloroprene Bonding	5
4	NA	1	NA	5	3	2	NA	✔	✔			✔	Type 20A compound Hydraulic fluids resistance (mineral and/or hydrocarbon based) Operating temperature range [-30°C; +120°C]	[40-80]	Nitrile hydraulic TM	4
4	NA	1	NA	5	3	2	NA	✔	✔			✔	Type 20B compound Hydraulic fluids resistance (mineral and/or hydrocarbon based) Operating temperature range [-50°C; +100°C]	60	Nitrile hydraulic BT	4
4	NA	1	NA	5	3	2	NA	✔	✔			✔	Type 21B compound Petroleum fluids resistance Operating temperature range [-40°C; +100°C]	60	Nitrile fuel BT	4
4	NA	1	NA	5	3	2	NA	✔	✔			✔	Type 23B compound Diester lubricants resistance Operating temperature range [-50°C; +120°C]	70	Nitrile diester BT	4
4	NA	1	NA	5	3	2	NA	✔	✔			✔	Material compliant to NF L17-120 Hydraulic fluids resistance (mineral and/or hydrocarbon based) Operating temperature range [-30°; +120°C]	70	20AX x=[5/8]	4
5	NA	1	NA	5	4	4	NA	✔	✔			✔	Standard material	[50-70]	Nitrile hydrogenated	4

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Traction / Tearing	Dielectric strength	Damping	Outgassing	Oils & hydrocarbons	Temperature dependency	Airborne agents (O_2, O_3, UV)	Radiation	Aeronautic	Defense	Space	Racing & Sports	Oil & Gas	Specific features	Hardness ShA	Reference	Bonding
5	NA	2	NA	1	2	1	NA	✔	✔					[40-80]	NR X x=[40-80]	5
5	NA	2	NA	1	2	1	NA	✔	✔			✔	Underwater applications	55	Natural 55 Oil&Gas	5
4	NA	2	NA	4	3	4	NA	✔	✔				Operating temperature range [-20°C; +120°C] Chemicals and solvents resistance	65	Hypalon 65	4
3	NA	2	NA	5	4	4	NA	✔	✔			✔	Type 60CX (x=[7/9]) compound Operating temperature range [-20°C; +230°C] Gas tightness Excellent resistance to oil, petroleum products, solvents, acids, etc.	[70/90]	FKM	NA
3	NA	1	NA	1	3	4	NA	✔	✔				Airborne agents resistance Hot air, strong acids and water resistance	60	EPDM	NA
4	NA	1	NA	4	3	3	NA	✔	✔			✔	Operating temperature range [-45°C; +100°C] Gas tightness Good resistance to oils, petroleum products, solvents, acids, etc.	[80-90]	Polyurethan	NA
3	NA	2	NA	4	3	4	NA	✔	✔			✔	Oil resistance Operating temperature range up to +150°C	60	Polyacrylate	NA

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