Jehbsil® Master Datasheet

JEHBSIL® Series Comparison

Technical Datasheet

General Purpose Silicone

JEHBSIL® GP Series

Property	Unit	Typical Values – Jehbsil GP Material Codes							Inspection Method
		GP-20	GP-30	GP-40	GP-50	GP-60	GP-70	GP-90	
Hardness	Shore A	20	30	40	50	60	70	90	DIN 53505
Density	g/cm³	1.07	1.11	1.12	1.12	1.13	1.17	1.22	ISO 1183-1A
Tensile Strength	N/mm²	6.0	9.9	10.0	10.4	11.0	9.1	7.0	DIN 53504 S1
Elongation at Break	%	1200	800	610	585	550	570	320	DIN 53504 S1
Compression Set[1]	%	28	20	30	32	35	30	35	DIN ISO 815B
Tear Strength	N/mm	21	31	17	19	21	55	19	ASTM D624B
Rebound Resilience	%	39	54	55	54	53	54	54	DIN 53512
Autoignition Temp.	°C	>400							DIN 51794
Service Temp.	°C	-60 to +200							ASTM D2000
FDA Food Contact[2]		Yes							CFR 21§177.2600
RoHS		Compliant							RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.
[2] Post-cured general purpose items only. Food contact intent must be confirmed prior to purchase.

Platinum Cure Silicone

JEHBSIL® PLAT Series

Property	Unit	Typical Values – Jehbsil Platinum Material Codes						Inspection Method
		Plat-30	Plat-40	Plat-50	Plat-60	Plat-70	Plat-90	
Hardness	Shore A	30	40	50	60	70	90	DIN 53505
Density	g/cm³	1.11	1.11	1.15	1.16	1.18	1.2	ISO 1183-1A
Tensile Strength	N/mm²	8.9	10.2	9.6	9.5	9.1	6.4	DIN 53504 S1
Elongation at Break	%	800	880	825	830	600	150	DIN 53504 S1
Compression Set[1]	%	20	25	20	20	14	30	DIN ISO 815B
Tear Strength	N/mm	31	20	38	40	39	17	ASTM D624B
Rebound Resilience	%	54	58.0	50	49	56	65	DIN 53512
Autoignition Temp.	°C	>400						DIN 51794
Service Temp.	°C	-60 to +200						ASTM D2000
FDA Food Contact		Yes						CFR 21§177.2600
WRAS Water Contact		Yes						WRAS
AS 4020 Drinking Water		Certified for Plat-60 and Plat-70						AS 4020
US Pharmacopeia		Class VI Certified						USP Class VI
RoHS		Compliant						RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.

Jehbsil® Master Datasheet

JEHBSIL® Series Comparison

Technical Datasheet

High Temperature Stable GP Silicone[3]

JEHBSIL® GP-H6F Series (20-50 ShA)

Property	Unit	Typical Values[4] Jehbsil GP-H6F Material Codes				Inspection Method
		GP-H6F-20	GP-H6F-30	GP-H6F-40	GP-H6F-50	
Hardness	Shore A	20	30	40	50	DIN 53505
Density	g/cm³	1.07	1.11	1.12	1.12	ISO 1183-1A
Tensile Strength	N/mm²	6.0	9.9	10.0	10.4	DIN 53504 S1
Elongation at Break	%	1200	800	610	585	DIN 53504 S1
Compression Set[1]	%	28	20	30	32	DIN ISO 815B
Tear Strength	N/mm	21	31	17	19	ASTM D624B
Rebound Resilience	%	39	54	55	54	DIN 53512
Autoignition Temp.	°C	>400				DIN 51794
Service Temp.	°C	**-60 to +300**				ASTM D2000
FDA Food Contact[2]		Yes				CFR 21§177.2600
RoHS		Compliant				RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.
[2] Post-cured general purpose items only. Food contact intent must be confirmed prior to purchase.
[3] Heat stable GP silicone are typically only available in lighter colours. Translucent and jet-black articles are unavailable.
[4] Typical heat stable articles retain virtually identical mechanical properties to standard counterparts.

High Temperature Stable GP Silicone Cont.[3]

JEHBSIL® GP-H6F Series (60-90 ShA)

Property	Unit	Typical Values[4] Jehbsil PLAT-H6F Material Codes			Inspection Method
		GP-H6F-60	GP-H6F-70	GP-H6F-90	
Hardness	Shore A	60	70	90	DIN 53505
Density	g/cm³	1.16	1.18	1.2	ISO 1183-1A
Tensile Strength	N/mm²	9.5	9.1	6.4	DIN 53504 S1
Elongation at Break	%	830	600	150	DIN 53504 S1
Compression Set[1]	%	20	14	30	DIN ISO 815B
Tear Strength	N/mm	40	39	17	ASTM D624B
Rebound Resilience	%	49	56	65	DIN 53512
Autoignition Temp.	°C	>400			DIN 51794
Service Temp.	°C	**-60 to +300**			ASTM D2000
FDA Food Contact[2]		Yes			CFR 21§177.2600
RoHS		Compliant			RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.
[2] Post-cured general purpose items only. Food contact intent must be confirmed prior to purchase.
[3] Heat stable GP silicone are typically only available in lighter colours. Translucent and jet-black articles are unavailable.
[4] Typical heat stable articles retain virtually identical mechanical properties to standard counterparts.

Jehbsil® Master Datasheet

JEHBSIL® Series Comparison

Technical Datasheet

High Temperature Stable Platinum Cure Silicone[2]

JEHBSIL® PLAT-H6F Series

Property	Unit	Typical Values[3] Jehbsil PLAT-H6F Material Codes			Inspection Method
		PLAT-H6F-30	PLAT -H6F-40	PLAT -H6F-50	
Hardness	Shore A	30	40	50	DIN 53505
Density	g/cm³	1.11	1.11	1.15	ISO 1183-1A
Tensile Strength	N/mm²	8.9	10.2	9.6	DIN 53504 S1
Elongation at Break	%	800	880	825	DIN 53504 S1
Compression Set[1]	%	20	25	20	DIN ISO 815B
Tear Strength	N/mm	31	20	38	ASTM D624B
Rebound Resilience	%	54	58.0	50	DIN 53512
Autoignition Temp.	°C	>400			DIN 51794
Service Temp.	°C	**-60 to +225**			ASTM D2000
FDA Food Contact		Yes			CFR 21§177.2600
RoHS		Compliant			RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.
[2] Heat stable GP silicone are typically only available in lighter colours. Translucent and jet-black articles are unavailable.
[3]Typical heat stable articles retain virtually identical mechanical properties to standard counterparts

High Temperature Stable Platinum Cure Silicone[2]

JEHBSIL® PLAT-H6F Series

Property	Unit	Typical Values[3] Jehbsil PLAT-H6F Material Codes			Inspection Method
		PLAT -H6F-60	PLAT -H6F-70	PLAT -H6F-90	
Hardness	Shore A	60	70	90	DIN 53505
Density	g/cm³	1.16	1.18	1.2	ISO 1183-1A
Tensile Strength	N/mm²	9.5	9.1	6.4	DIN 53504 S1
Elongation at Break	%	830	600	150	DIN 53504 S1
Compression Set[1]	%	20	14	30	DIN ISO 815B
Tear Strength	N/mm	40	39	17	ASTM D624B
Rebound Resilience	%	49	56	65	DIN 53512
Autoignition Temp.	°C	>400			DIN 51794
Service Temp.	°C	**-60 to +225**			ASTM D2000
FDA Food Contact		Yes			CFR 21§177.2600
RoHS		Compliant			RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.
[2] Heat stable GP silicone are typically only available in lighter colours. Translucent and jet-black articles are unavailable.
[3]Typical heat stable articles retain virtually identical mechanical properties to standard counterparts

Jehbsil® Master Datasheet

JEHBSIL® Series Comparison

Technical Datasheet

Silicone for Sleeving Applications

JEHBSIL® GP-U Series

Property	Unit	Typical Values – Jehbsil GP Material Codes				Inspection Method
		GP-135U	GP-175U	GP-345U	GP-370U	
Hardness	Shore A	40	70	45	70	DIN 53505
Density	g/cm³	1.11	1.18	1.10	1.18	ISO 1183-1A
Tensile Strength	N/mm²	8.2	9.3	7.2	9.3	DIN 53504 S1
Elongation at Break	%	420	260	460	440	DIN 53504 S1
Compression Set[1]	%	39	37	42	52	DIN ISO 815B
Tear Strength	N/mm	17	21	31	40	ASTM D624B
Rebound Resilience	%	53	45	48	36	DIN 53512
Autoignition Temp.	°C	>400				DIN 51794
Service Temp.	°C	-60 to +200				ASTM D2000
FDA Food Contact[2]		Yes				CFR 21§177.2600
RoHS		Compliant				RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.
[2] Post-cured general purpose items only. Food contact intent must be confirmed prior to purchase.

Sponge Silicone

JEHBSIL® SP Series

Property	Unit	Typical Values – Jehbsil Sponge Material Codes			Inspection Method
		SP-20 Base	SP-40 Base	SP-60 Base	
Hardness	Shore A	~8	~15	~25	DIN 53505
Density	g/cm³	0.4-0.7	0.4-0.7	0.4-0.7	BENISO 845
Tensile Strength	N/mm²	1.7	1.2	1.9	ASTM D412
Elongation at Break	%	550	420	240	ASTM D412
Compression Set[1]	%	43	9.5	29.2	ASTM D1056
Compression Deflection[2]	kPa	34	65	90	ASTM D1056
Autoignition Temp.	°C	>400			DIN 51794
Service Temp.	°C	-60 to +200			ASTM D2000
Water Absorption	%	<5			ASTM D1056
Cell Classification		Closed-Cell			ASTM D1056
RoHS		Compliant			RoHS 2015

[1] Compression Set Measured at 22 hrs at 100°C.
[2] Compression Deflection Measured at 25% Strain.

Jehbsil® Master Datasheet

JEHBSIL® Series Comparison

Technical Datasheet

Electrically Conductive Silicone

JEHBSIL® COND Series

Property	Unit	Typical Values		Inspection Method
		Jehbsil GP Material Codes		
		COND-50	COND-70	
Hardness	Shore A	50	40	DIN 53505
Density	g/cm³	1.2	1.4	ISO 1183-1A
Tensile Strength	N/mm²	5.5	8.2	DIN 53504 S1
Elongation at Break	%	390	415	DIN 53504 S1
Compression Set[1]	%	29	10	DIN ISO 815B
Tear Strength	N/mm	11.0	17.5	ASTM D624B
Rebound Resilience	%	57	29	DIN 53512
Volume Resistivity	Ω/cm	**7**	**1.6**	IEC 62631-3-1
Autoignition Temp.	°C	>400		DIN 51794
Service Temp.	°C	-60 to +200		ASTM D2000
RoHS		Compliant		RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C

Flame Retardant Silicone

JEHBSIL® FRC Series

Property	Unit	Typical Values						Inspection Method
		Jehbsil Platinum Material Codes						
		FRC-30	FRC-40	FRC-50	FRC-60	FRC-70	FRC-90	
Hardness	Shore A	30	40	50	60	70	90	DIN 53505
Tensile Strength	N/mm²	9.0	8.5	7.9	7.4	6.9	5.8	DIN 53504 S1
Elongation at Break	%	1500	1150	950	750	550	250	DIN 53504 S1
Compression Set[1]	%	53	54	55	57	58	60	DIN ISO 815B
Tear Strength	N/mm	45	40	35	31	26	17	ASTM D624B
Service Temp.	°C	-60 to +200						ASTM D2000
Autoignition Temp.	°C	> 400						DIN 51794
Limiting Oxygen Index	%	**> 36**						EN ISO4589-2
Rail Fire Safety		**HL3, HL2 and HL1 Compliant for R22 and R23**						EN45545-2
RoHS		Compliant						RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C

Jehbsil® Master Datasheet

JEHBSIL® Series Comparison

Technical Datasheet

Fluorosilicone

JEHBSIL® GP Series

Property	Typical Values		Inspection Method
	Unit	Jehbsil Sponge Grades	
		FL-40	
Hardness	Shore A	40	DIN 53505
Density	g/cm^3	1.4	ISO 1183-1A
Tensile Strength	N/mm^2	8.2	DIN 53504 S1
Elongation at Break	%	415	DIN 53504 S1
Compression Set[1]	%	10	DIN ISO 815B
Tear Strength	N/mm	17.5	ASTM D624B
Rebound Resilience	%	29	DIN 53512
Autoignition Temp.	°C	>400	DIN 51794
Service Temp.	°C	-60 to +170	ASTM D2000
RoHS		Compliant	RoHS 2015

[1] Compression Set Measured at 22 hrs at 175°C.

General Silicone Properties

Typical Properties of All JEHBSIL® Grades

Property	Unit	Approximate Value	Inspection Method
Coefficient of Friction	Dimensionless	0.8 – 1.0	Jehbco In-house
Linear Coefficient of Thermal Expansion/Shrinkage	% per °C	~ 0.02 – 0.04	Jehbco In-house
Thermal Conductivity @ 100 °C	W/m.K	0.2 – 0.3	DIN 52 612
Limiting Oxygen Index (Non-flame retardant grades)	%	27 – 35	DIN ISO 815B
Dielectric Constant @ 25 °C, 50 Hz	Dimensionless	2.7 – 3.3	DIN 53 482
Dielectric Strength	kV/mm	> 20	IEC 60243-1
Electrical Surface Resistivity (Non-conductive grades)	Ω	10^{12} – 10^{13}	VDE 0303
Electrical Volume Resistivity (Non-conductive grades)	Ω.cm	10^{15}	VDE 0303