

Thermosets and Composites

TECHNICAL INFORMATION FOR PLASTICS USERS

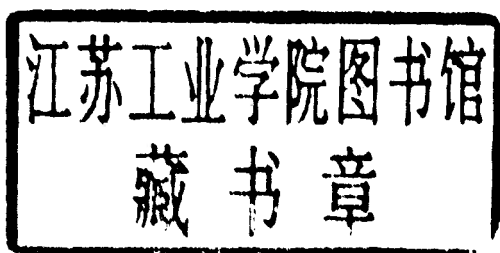
Michel Biron



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Thermosets and Composites: Technical Information for Plastics Users

Michel Biron



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Disclaimer

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The characteristic data and economic figures are not guaranteed and cannot be used for calculations, computations or other operations to determine design, cost-effectiveness or profitability.

The reader must verify the technical data and economic figures with his own suppliers of raw materials or parts, and other current technical and economic sources.

Acronyms and abbreviations

5V	UL fire rating
ABS	Acrylonitrile-Butadiene-Styrene
AMC	Alkyd Moulding Compound
ArF or AF	Aramid Fibre
ASA	Acrylonitrile Styrene Acrylate
ASTM	American Society for Testing and Materials
ATH	Aluminium TriHydrate
BF	Boron Fibre
BMC	Bulk Moulding Compound
BMI	BisMaleImide
CA	Cellulose Acetate
CAB	Cellulose AcetoButyrate
CAD	Computer Aided Design
CE	Cyanate Ester
CF	Carbon Fibre
CFC	ChloroFluoroCarbon
CIC	Continuous Impregnated Compound
CNT	Carbon NanoTube
CONC	Concentrated solution
COPE	COPolyEster TPE
CS	Compression Set
CUT	Continuous Use Temperature under unstressed state
Cy	PolyCyanate
DAP	DiAllyl Phthalate
DCPD	Poly(DicycloPentaDiene)
DMC	Dough Moulding Compound
DRIV	Direct Resin Injection and Venting
DSC	Differential Scanning Calorimeter

EB	Elongation at Break
EE	Electricity & Electronics
EMI	ElectroMagnetic Interference
EP	EPoxy
ESC	Environmental Stress Cracking
ESD	ElectroStatic Discharge
ETFE	Ethylene-TetraFluoroEthylene
FEP	Fluorinated Ethylene Propylene
FR	Fire Retardant
GF	Glass Fibre
GMT	Glass Mat Thermoplastic
HB	UL fire rating
HDT	Heat Deflection Temperature
HPGF	High Performance short Glass Fibre reinforced polypropylene
HSCT	High Speed Civil Transport (aircraft)
HTPC	Hybrid ThermoPlastic Composite
HTV	High Temperature Vulcanization
ILSS	InterLaminar Shear Strength
IMC	In Mould Coating
IPN	Interpenetrating Polymer Network
IRHD	International Rubber Hardness
IRM	International Referee Material
ISO	International Standardisation Organisation
LCP	Liquid Crystal Polymer
LCTC	Low Cost Tooling for Composites
LDPE	Low Density PolyEthylene
LEFM	Linear Elastic Fracture Mechanics
LFRT	Long Fibre Reinforced Thermoplastic
LFT	Long Fibre reinforced Thermoplastic
LGF	Long Glass Fibre
LIM	Liquid Injection Moulding
LRTM	Light RTM
LSR	Liquid Silicone Rubber
LWRT	Low Weight Reinforced Thermoplastic

MF	Melamine
O&M	Organisation & Methods department
PA	PolyAmide
PAI	PolyAmide Imide
PAN	PolyAcryloNitrile
PBI	PolyBenzImidazole
PBT	PolyButyleneTerephthalate
PC	PolyCarbonate
PCL	PolyCaproLactone
PCTFE	PolyChloroTriFluoroEthylene
PE	PolyEthylene
PEAR	PolyEtherAmide Resin
PEBA	PolyEther Bloc Amide
PEEK	PolyEtherEther Ketone
PEG	PolyEthylene Glycol
PEI	PolyEtherImide
PEK	PolyEtherKetone
PES or PESU	PolyEtherSulfone
PET	PolyEthylene Terephthalate
PETI	PhenylEthyne with Imide Terminations
PF	Phenolic resin
PF1Ax	PF general purpose, ammonia free
PF2Cx	PF heat resistant, glass fibre reinforced
PF2Dx	PF impact resistant, cotton filled
PF2E1	PF mica filled
PFA	PerFluoroAlkoxy
PGA	PolyGlycolic Acid
PHA	PolyHydroxyAlkanoate
PHB	PolyHydroxyButyrate
PI	PolyImide
PLA	PolyLactic Acid
PMI	PolyMethacrylImide
PMMA	PolyMethylMethAcrylate
POM	PolyOxyMethylene or Polyacetal

PP	PolyPropylene
PPE	PolyPhenylene Ether
PPO	PolyPhenylene Oxide
PPS	PolyPhenylene Sulfide
PPSU	PolyPhenyleneSulfone
Prepreg	Preimpregnated
PS	PolyStyrene
PSU	PolySulfone
PTFE	PolyTetraFluoroEthylene
PUR	PolyURethane
PV	Pressure*Velocity
PVA	PolyVinyl Alcohol
PVC	PolyVinyl Chloride
PVDF	PolyVinylidene Fluoride
PVF	Polyvinyl Fluoride
RF	RadioFrequency
RFI	Resin Film Impregnation
RH	Relative Humidity or Hygrometry
RIM	Reaction Injection Moulding
RIRM	Resin Injection Recirculation Moulding
RP	Reinforced Plastic
RRIM	Reinforced Reaction Injection Moulding
RT	Room Temperature
RTM	Resin Transfer Moulding
RTP	Reinforced ThermoPlastic
RTV	Room Temperature Vulcanization
SAN	Styrene AcryloNitrile
SATUR	Saturated solution
SB	Styrene Butadiene
SCRIMP	Seeman's Composite Resin Infusion Moulding Process
Si	Silicone
SMA	Styrene Maleic Anhydride
SMC	Sheet Moulding Compound
SN curve	Plot of stress or strain (S) leading to the failure after N cycles of repeated loading