

# Teflon® PTFE 640XT X

Polytetrafluoroethylene

DuPont Fluoropolymers

## Message:

DuPont™ Teflon® PTFE 640XT X is a polytetrafluoroethylene fine powder resin used primarily for paste extrusion. Teflon® PTFE 640XT X offers the excellent combination of properties typical of the Teflon® fluoropolymer resins:

non-aging  
characteristics;  
chemical  
inertness  
to  
nearly  
all industrial  
chemicals  
and solvents;  
exceptional  
dielectric  
properties,  
stable  
with frequency and  
temperature;  
toughness  
and  
flexibility;  
low  
coefficient  
of  
friction;  
non-stick  
characteristics;  
negligible  
moisture  
absorption;  
excellent  
weather  
resistance;  
service  
temperature  
up  
to  
260°C (500°F);  
useful  
properties  
at  
-240  
°C  
(-400  
°F);  
Teflon®  
PTFE  
640XT  
X  
is  
designed  
for processing  
over  
a  
wide extrusion

reduction  
ratio  
range  
(250:1  
to  
5000:1),  
with excellent performance  
even  
at  
the  
top of  
this  
range.  
Due  
to  
its outstanding transformation  
characteristics,  
Teflon ® PTFE 640XT X can be extruded with very low lubricant levels over a wide reduction ratio  
range,  
while  
the  
extrusion  
pressure  
remains  
low.  
For example,  
Teflon ® PTFE 640XT X can be extruded into wire with excellent  
performance  
in  
the  
reduction  
ratio range  
of  
1000:1  
to 4500:1  
with  
a  
single  
lubricant  
level  
of  
16%  
(based  
on  
total weight).  
This  
means  
that  
a single  
PTFE/lubricant  
mixture  
can  
be used  
for  
many  
constructions  
being  
manufactured  
in  
the  
same size extruder line.  
In

addition,  
the  
excellent  
high  
reduction  
ratio performance  
means that  
products  
made  
in  
small-bore  
machines  
with  
other  
lower reduction  
ratio  
rated  
fine  
powders  
can  
now  
be extruded  
in  
larger ones,  
which  
represent  
a  
considerable  
economic  
advantage,  
since more material can be extruded per extrusion. This also means that  
longer  
lengths  
of  
wire  
or  
tubing  
can be  
achieved  
in  
one extrusion.  
Teflon ®  
PTFE  
640XT  
X  
meets  
the requirements  
of  
ASTM D  
4895-10,  
Type  
I,  
Grade  
1,  
Class  
C.  
Typical Applications  
Teflon ®  
PTFE  
640XT  
X  
is

mainly  
used for  
insulation  
of  
high-performance  
wire  
and  
cables,  
as  
well  
as  
tubing.  
It  
is also  
suitable for other typical applications such as additives where some properties  
of  
PTFE  
are required.

General Information			
Features	Food Contact Acceptable		
	Good Chemical Resistance		
	Good Electrical Properties		
	Good Flexibility		
	Good Toughness		
	Good Weather Resistance		
	Low Friction		
	Low Moisture Absorption		
	Solvent Resistant		
Uses	Additive		
	Insulation		
	Tubing		
	Wire & Cable Applications		
Agency Ratings	EU 10/2011		
	FDA 21 CFR 177.1550		
Forms	Powder		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	2.16	g/cm <sup>3</sup>	ISO 12086, ASTM D4895
Apparent Density	0.50	g/cm <sup>3</sup>	ASTM D4895, ISO 12086
Average Particle Size			
--	450	µm	ISO 12086
--	450	µm	ASTM D4895
Thermal Instability Index			


--	< 15.0		ISO 12086
--	< 15.0		ASTM D4895
Extrusion Pressure			
at RR = 1600:1	22.0	MPa	ISO 12086
at RR = 1600:1	22.0	MPa	ASTM D4895
at RR = 2500:1	28.0	MPa	ASTM D4895
at RR = 2500:1	28.0	MPa	ISO 12086
Thermal	Nominal Value	Unit	Test Method
Melting Temperature			ASTM D4591, ISO 12086
-- <sup>1</sup>	326	°C	
-- <sup>2</sup>	344	°C	
NOTE			
1.	Second		
2.	Initial		

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