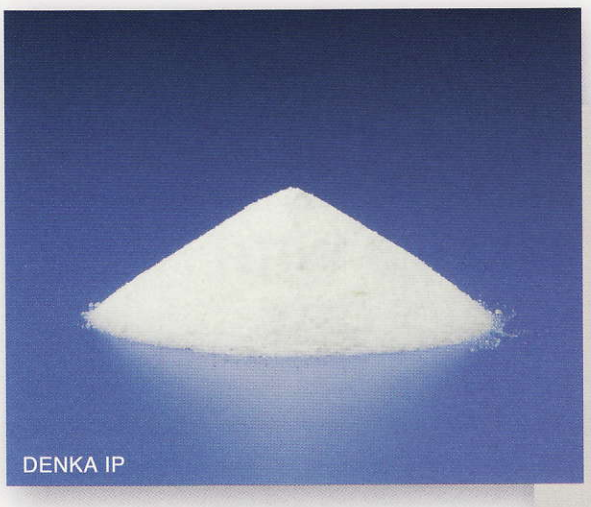
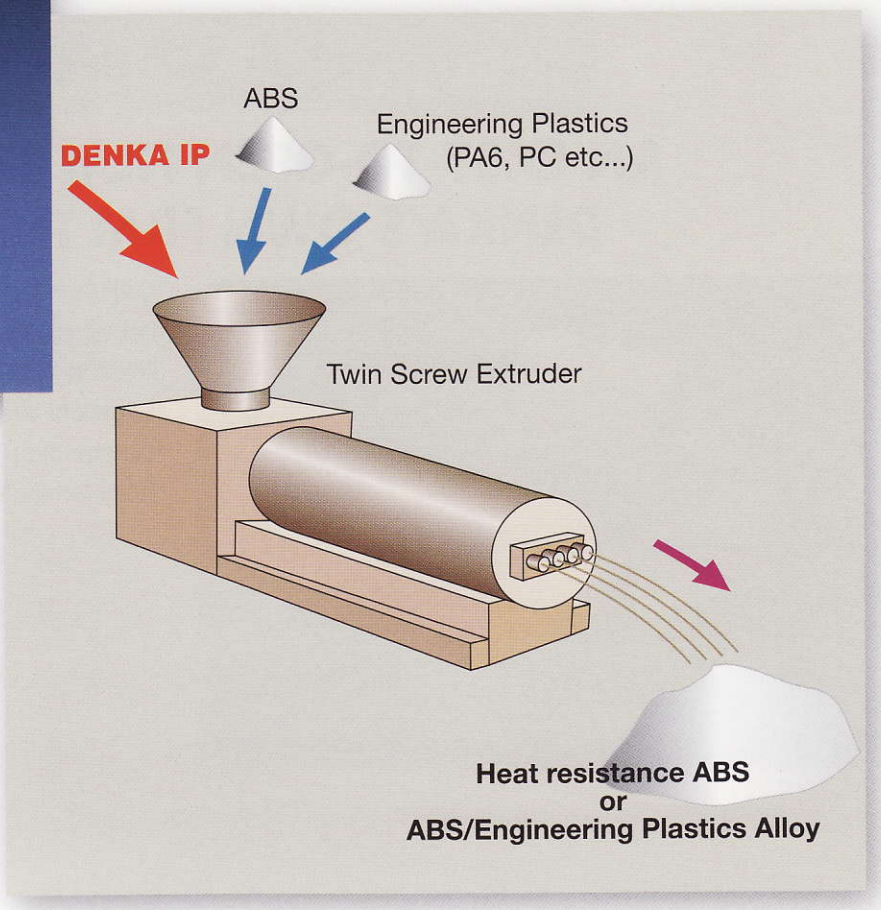
DENKA IP

MALEIMIDE TYPE HEAT RESISTANCE MODIFIER

"DENKA IP" is SMI Copolymer (Styrene-N-Phenylmaleimide-Maleic anhydride Copolymer).
"DENKA IP" has High heat resistance, Excellent heat stability.
One of the important uses of "DENKA IP" is modifier of heat resistance to produce heat resistant ABS.
Conventionally α-methylstyrene is very popular as raw material of heat resistant ABS. But recently maleimide ABS based on SMI has becoming more popular than heat resistant ABS based on α-methylstyrene.
"DENKA IP" has been developed by our own technology which is one step polymerization process, so-called post imidization process. Therefore our process is very economical polymer process compared with conventional process to use N-PMI monomer. "DENKA IP" is very useful and economical material as modifier of heat resistance for ABS.
In addition, "DENKA IP" becomes Compatibiraizar for the ABS/Engineering Plastics type alloy resin. "DENKA IP" contains a little MAH. Since the reactivity of MAH is high, it reacts with amino group in PA6 or hydroxyl group in PC and polyester. "DENKA IP" can improve the performance of the ABS/Engineering Plastics type alloy resin.


DENKA IP



◆DENKA IP Grade

Grade			*MS-NB*	*MS-NI*	*MS-NIP*	*MS-CP*	*MS-L2A*
Property			General Purpose	Easy Compound		Normal Reactive	High Reactive
			Heat Resistance Modifier for ABS			Compatibilizer for the ABS alloy (ex.PA,PC,PBT...)	
Specific gravity	-	ASTM D792	*1.18*	*1.18*	*1.18*	*1.18*	*1.18*
Glass transition point (Tg)	℃	DSC	*196*	*185*	*185*	*196*	*196*
Thermal degradation temp. (1wt% weight loss temp.)	℃	TGA	*350*	*350*	*350*	*350*	*350*
MFR (265℃*10kg)	g/10min	ASTM D1238	*3*	*11*	*11*	*3*	*2*
APPEARANCE	-	-	*powder*	*powder*	*pellet*	*pellet*	*powder*

* The above values are typical and not guaranteed.

◆Example of Application

	Unit	Methods	**Heat Resistance for ABS**		**Compatibilizer for PA6/ABS**	
Base Resin	wt%		ABS (100)	ABS (87)	PA6 (50) ABS Graft-Rubber (50)	PA6 (47.5) ABS Graft-Rubber (47.5)
DENKA IP Grade	wt%		-	MS-NI (13)	-	MS-CP (5)
Vicat Softing Temp. (50N)	℃	ISO 306	*95*	*107*	*100*	*105*
Deflection Temperature under load (1.8MPa, Flatwise)	℃	ISO 75-1,2	*75*	*86*	*59*	*63*
Charpy Impact Strength (Notched)	kJ/m^2	ISO 179	*35*	*21*	*26*	*87*

* The above values are typical and not guaranteed.