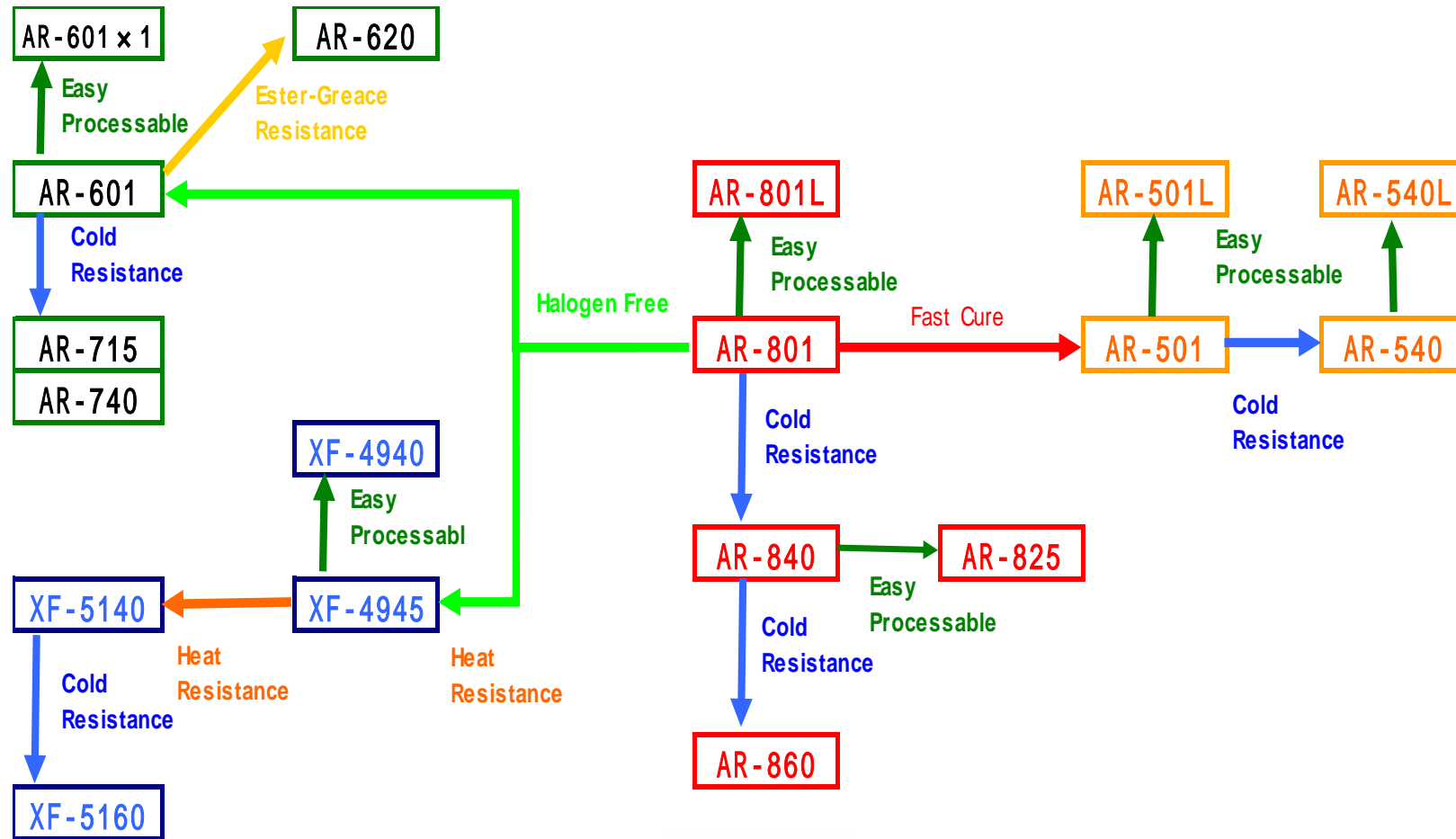


GRADES OF TOA ACRON AR AND THEIR PRINCIPLE PROPERTIES

Trade Name	Typical Properties of Rubber				Appearance of Product	Package	Characteristic	Main Applications
	Applicable Temperature Range()	Mooney Viscosity ML1+4,100	Type of Cure System	Cure Site				
TOA ACRON AR-601	-15 ~ 180	25 ~ 35	Post cure type	Epoxide	Milky white Block	20kgs Paper bag	Standard	Seals,Boots,O-rings
TOA ACRON AR-601 ~1	-15 ~ 180	20 ~ 30	Post cure type	Epoxide	Milky white Block	20kgs Paper bag	Low Mooney type of AR-601	Gaskets,Hoses
TOA ACRON AR-601 ~2	-15 ~ 180	45 ~ 55	Post cure type	Epoxide	Milky white Block	20kgs Paper bag	High Mooney type of AR-601	Hoses
TOA ACRON AR-715	-25 ~ 175	35 ~ 45	Post cure type	Epoxide	Milky white Block	20kgs Paper bag	Semi-cold resistant	Oil pan,Rocker Gaskets
TOA ACRON AR-740	-35 ~ 170	35 ~ 45	Post cure type	Epoxide	Milky white Block	20kgs Paper bag	Standard of cold resistant type	Shaft-seals
TOA ACRON AR-801	-15 ~ 180	50 ~ 60	Fast cure type	Halogen	Light yellow Block	20kgs Paper bag	Standard	General purpose parts
TOA ACRON AR-801L	-15 ~ 180	32 ~ 42	Fast cure type	Halogen	Light yellow Block	20kgs Paper bag	Low Mooney type of AR-801	
TOA ACRON AR-825	-40 ~ 170	35 ~ 45	Fast cure type	Halogen	Light yellow Block	20kgs Paper bag	Easy processable type of AR-840	Gaskets,Hoses
TOA ACRON AR-840	-40 ~ 170	40 ~ 50	Fast cure type	Halogen	Light yellow Block	20kgs Paper bag	Cold resistant	O-rings,Shaft seals
TOA ACRON AR-860	-50 ~ 170	30 ~ 40	Fast cure type	Halogen	Light yellow Block	20kgs Paper bag	Ultra Cold resistant	Hoses,Wire boots
TOA ACRON AR-501	-15 ~ 180	45 ~ 55	Fast cure type	Halogen/Carboxyl	Light brown Block	20kgs Paper bag	Stadard	
TOA ACRON AR-501L	-15 ~ 180	32 ~ 42	Fast cure type	Halogen/Carboxyl	Light brown Block	20kgs Paper bag	Low Mooney type of AR-501	
TOA ACRON AR-540	-40 ~ 170	25 ~ 35	Fast cure type	Halogen/Carboxyl	Light brown Block	20kgs Paper bag	Cold resistant	
TOA ACRON AR-540L	-40 ~ 170	15 ~ 25	Fast cure type	Halogen/Carboxyl	Light brown Block	20kgs Paper bag	Low Mooney type of AR-540	
TOA ACRON XF-4945	-40 ~ 170	30 ~ 40	Fast cure type	Carboxy	Light yellow Block	20kgs Paper bag	Cold resistant	Gaskets,Hoses
TOA ACRON XF-4940	-40 ~ 180	32 ~ 42	Fast cure type	Carboxy	Light yellow Block	20kgs Paper bag	Cold resistant	Hoses
TOA ACRON XF-5140	-40 ~ 180	32 ~ 42	Fast cure type	Carboxy	Light yellow Block	20kgs Paper bag	Cold resistant	Gaskets,O-rings,Hoses
TOA ACRON XF-5160	-50 ~ 180	25 ~ 35	Fast cure type	Carboxy	Light yellow Block	20kgs Paper bag	Ultra Cold resistant	Gaskets,O-rings,Hoses

RECOMMENDATIONS MAP FOR TOA ACRON AR SERIES

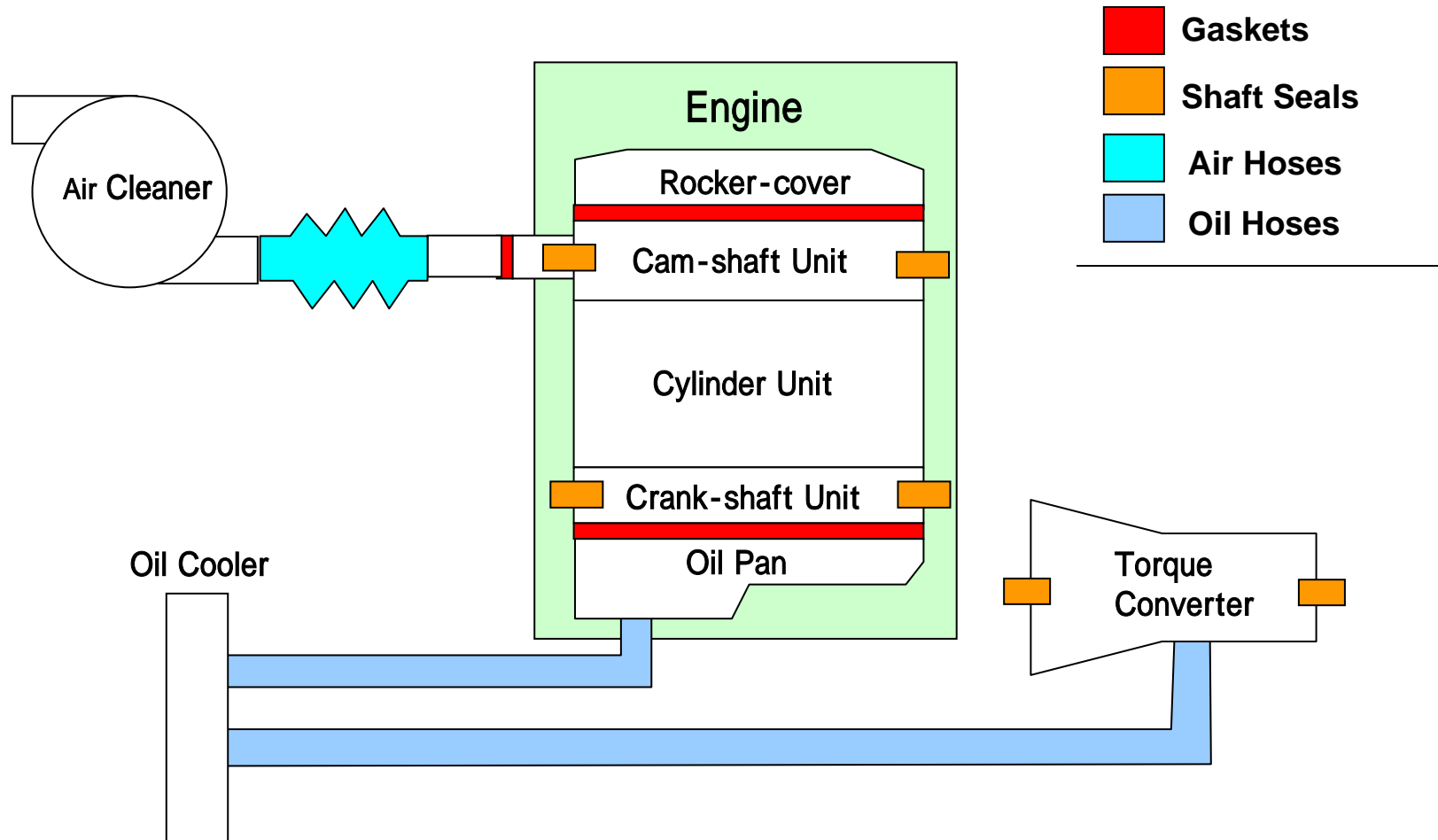


Applications of polyacrylic elastomer

APPLICATIONS OF ACM - 1

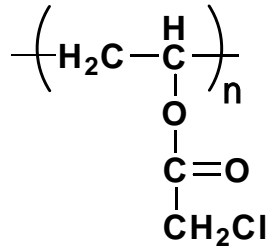
Gaskets Rocker Cover Gasket
 Oil Pan Gasket
 Intake Manifold Gasket
 Timing Belt Cover Gasket
Oil Hoses Engine Oil Cooler Hose
 ATF Cooler Hose
 Emission Control Hose
 Power Steering Hose
Air Hoses Inter-Cooler Hose
 Air-Duct Hose
Shaft Seals(Oil Seals)
Bearing Seals
O-Rings
Packings, Seals
Boots
Gromets, Caps, Other Small Parts

APPLICATIONS OF ACM - 2



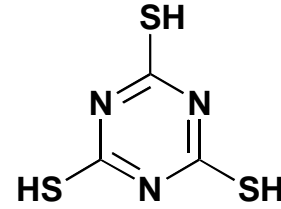
Cure Site	Cold Resit.	Tohpe Corp. * TOA ACRON AR	Nippon Zeon * NIPOL AR	Unimatec * NOXTITE	Zeon Chemical * HyTemp	Denkikagaku * DENKA ER	Dupont * VAMAC
Chlorine Group	-10			A-1095			
	-20			PA-212			
	-30			PA-214			
	-40						
Activated Chlorine Group	-10	AR-801,801L	AR-71	PA-401,401L	AR-71 AR-715,AR-72LF		
	-20		AR-72LS	PA-402,402L,402S			
	-30	AR-840	AR-72LF	PA-402K,403			
	-40	AR-825 AR-860	AR-72HF AR-74	PA-404,404N PA-404K			
Epoxy Group	-10	AR-601 AR-601X1 AR-601X2	AR-31	PA-301,301K		ER-4200	
	-20	AR-715	AR-51	A-5098		ER-5300	
	-30	AR-740	AR-32	PA-312,302		ER-4300	
	-40		AR-42,-42W AR-53,-53L AR-54	PA-303		ER-3400 ER-8401,ANX-3	
Chlorine Carboxyl Group	-10	AR-501,501L			#4051,4051EP #4051CG		
	-20				#4052,4052EP #4053EP		
	-30	AR-540,540L			#4054		
	-40						
Carboxyl Group	-10			PA-501			
	-20	XF-4945, XF-5140	AR-12, AR-22	PA-502,502L,512E		ER A403	VAMAC LS
	-30	XF-4940	AR-14	PA-522,522HF		ER A804	VAMAC G,HG
	-40	XF-5160					VAMAC GLS

Active Chlorine Type ACM / Triazine Cure-system

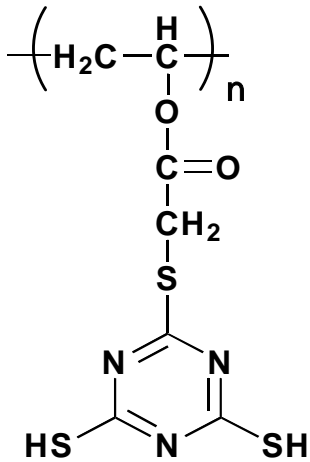


Active Chlorine Type ACM

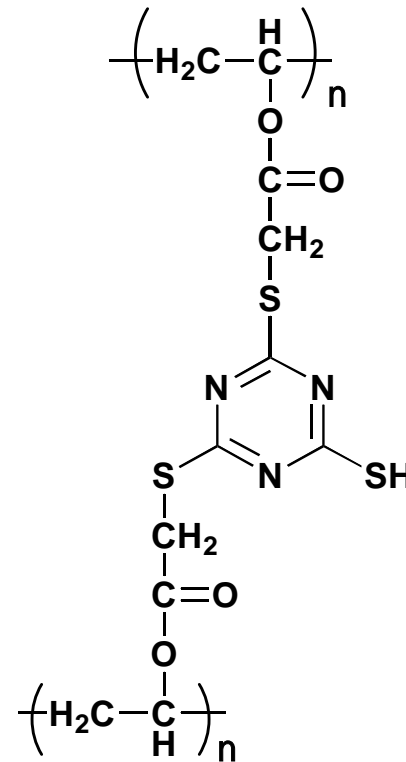
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Trimercapto triazine

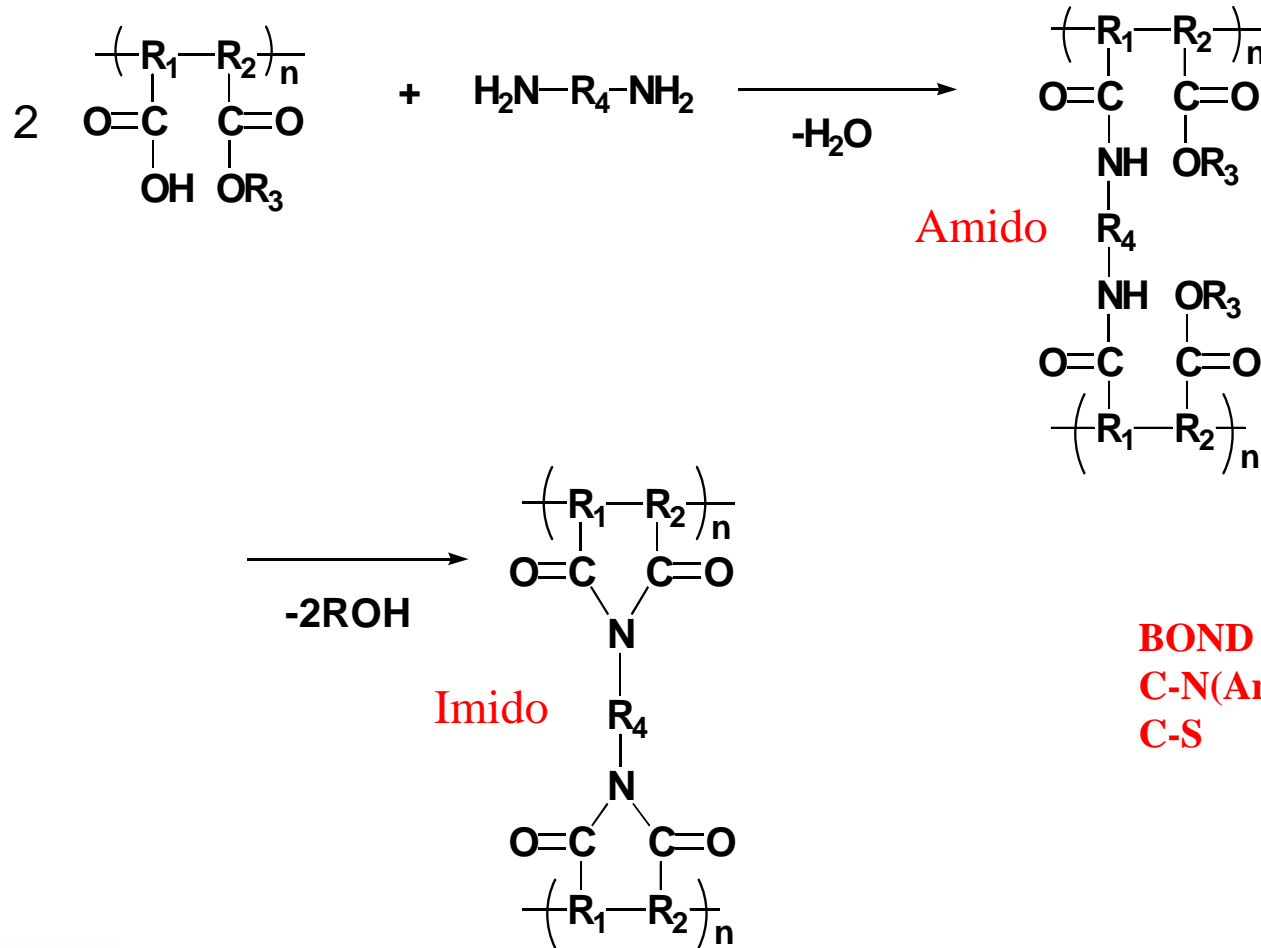


HCl



HCl

Carboxyl Type ACM / Diamine Cure-system



BOND ENERGY(kcal/mol)	
C-N(Amido)	88
C-S	64