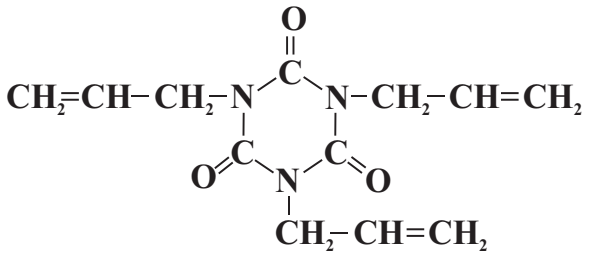
Nippon Kasei MADE IN JAPAN

TAIC (Triallyl Isocynurate)

Co-agent for Peroxide Cure



Chemical formula : $C_{12}H_{15}N_3O_3$

Parameter	Value
C.A.S. No.	1025-15-6
EINECS No.	2138347
Appearance	Slightly yellowish and transparent liquid above 30°C or white powder at below 27°c
Viscosity	0～110mPa・s(30°C)
Specific Gravity	1.15 – 1.17
Flash Point	245°C by Pensky-Martens method
Boiling Point	144°C at 3mm Hg
Melting Point	25°C to 27°C

Salient Features:

TAIC is a symmetric polyfunctional triazine compound which has been used for the cross linking reaction of synthetic rubbers and plastics (polyolefinic) TAIC possesses a thermally stable (**longer life radicals via primary radicals**) triazine ring and unique properties, providing a polymer with improved properties like :

Advantages :

- Heat Resistance
- Better Mechanical Properties – Tensile Strength Increases,
- Cross Linking Efficiency – Lower t90 value – Reduced Cure Time , Faster Production Rate, Higher Cross Link Density
- Weather Resistance
- Oil Resistance
- Hydrolysis Resistance
- Better Compression Set Properties 14% to 51% Improvement
- Better Abrasion Resistance

Polymer chains are linked by C-C bonds by coupling action , the C-C bond energy is very much higher than the S-S mono sulphidic .

Polymerwise Applications :

Polymer	Advantages
Chlorinated Polyethylene [CPE]	Acts as acid accept or – thereby better Physical Properties.
EPM/EPDM	31% Less Curing Time Better Compression Set Properties >14% Improvement
EVA	31% Less Curing Time, Better Compression Set Properties 51% Improvement.
HNBR	Compression Set 9 % - 23% Improvement
FKM (Viton)	50% Faster Cure Rate, Better Physical Properties
CSM (Hyplon)	75% Faster Cure Rate, Compression Set 44% improvement
XLPE – Radiation Vulcanization	Superior Insolubility in Solvents, Higher Tensile Strength at Higher Temperature
Millable Polyurethane	Increases Heat Resistance, Tensile Strength and Hardness.