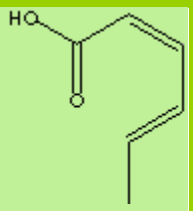
SORBIC ACID



PRODUCT IDENTIFICATION	
CAS NO.	110-44-1; 91751-55-2
EINECS NO.	203-768-7
FORMULA	$CH_3CH=CHCH=CHCOOH$
MOL WT.	112.13
H.S. CODE	2916.19
TOXICITY	Oral, rat LD50: 7360 mg/kg
SYNONYMS	(E,E)-2,4-Hexadienoic acid; 2-Propenylacrylic acid; Preservastat; Sorbistat; Hexadienoic acid; 1,3-pentadiene-1-carboxylic acid; Panosorb; (2-butenylidene)acetic acid; Crotylidene acetic acid; Acide sorbique; Kyselina 1,3-pentadien-1-karboxylova; Kyselina sorbova;
DERIVATION	
CLASSIFICATION	

DESCRIPTION OF SORBIC ACID AND ITS SALT

Sorbic Acid (also called chemically 2,4-hexadienoic acid), a white crystalline powder or granule form for dust free, is an unsaturated fatty acid which has two double bonds in conjugation that is, two double bonds separated only by one single bond. It and its salts (potassium sorbate, calcium sorbate ; its salts are used according to differences in solubility.) are used as preservatives in wide range of food products as well as in their packaging materials, since they are characterized by their broad effectiveness to inhibit molds, yeast, and many bacteria growth in food. Potassium sorbate, white to slightly yellow crystalline powder, is the potassium salt of sorbic acid and is much more soluble in water than the acid. Potassium sorbate will releases back sorbic acid if dissolved in water. It is effective up to pH 6.5 but effectiveness increases as the pH decreases. The lower the pH value of the product the lower amount of Sorbic Acid or Potassium Sorbate is needed for preservation. Its industrial applications include use in coating industry to improve gloss and in rubber industry.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	White crystalline powder
MELTING POINT	134.5 C
BOILING POINT	228 C (Decomposes)
SPECIFIC GRAVITY	1.204
SOLUBILITY IN WATER	Slightly
pH	
VAPOR DENSITY	3.87
AUTOIGNITION	
NFPA RATINGS	Health: 0 Flammability: 1 Reactivity: 1
REFRACTIVE INDEX	
FLASH POINT	126 C
STABILITY	Stable under ordinary conditions

APPLICATIONS

Sorbic acid is used as a mold, bacterial and yeast inhibitor and as a fungistatic agent in foods. It is also used in cosmetics, pharmaceutical, tobacco and flavoring products. In wines, it is to prevent the secondary fermentation of residual sugar. It is used in coating to improve gloss and as an intermediate to manufacture plasticizers and lubricants. It is used as an additive in rubber industry to improve milling characteristics.

A preservative is an additive for foods, pharmaceuticals, personal care products, cosmetics

and other industrial products to reduce spoilage that air, fungi, bacteria, or yeast can cause. Members of common preservative for foods, pharmaceuticals, personal care products and cosmetics include:

Preservative	CAS RN
1,2-Dibromo-2,4-dicyanobutane	35691-65-7
1,2-Octanediol	1117-86-8
1,3-Dimethylol-5,5-dimethylhydantoin	6440-58-0
2-Methyl-4-isothiazolin-3-one	2682-20-4
3-Iodo-2-propynylbutylcarbamate	55406-53-6
Acetic acid	64-19-7
Ammonium acetate	631-61-8
Ascorbyl palmitate	137-66-6
Benzalkonium chloride	8001-54-5
Benzethonium chloride	121-54-0
Benzoic acid	65-85-0
Biphenyl	92-52-4
Borax	1303-96-4
Boric acid	10043-35-3
Butylated hydroxyanisole	25013-16-5
Butylated hydroxytoluene	128-37-0
Butylparaben	94-26-8
Calcium acetate	62-54-4
Calcium hydrogen sulfite	13780-03-5
Calcium benzoate	2090-05-3
Calcium formate	544-17-2
Calcium phytate	7776-28-5
Calcium propionate	4075-81-4
Calcium sulfite	10257-55-3
Calcium-magnesium phytate	3615-82-5
Carbon disulfide	75-15-0
Cetylpyridinium chloride	123-03-5
Cetylpyridinium chloride	6004-24-6
Chlorhexidine acetate	56-95-1
Chlorobutanol	57-15-8
Chlorphenesin	104-29-0
Diazolidinylurea	78491-02-8
Diethyl pyrocarbonate	1609-47-8
Dimethyl dicarbonate	4525-33-1
Ethyl 4-(3-(1-(6-methyl-3-pyridazinyl)-4-piperidinyl)propoxy)benzoate	124436-97-1
Ethylparaben	120-47-8
Formaldehyde	50-00-0
Formic acid	64-18-6
Furylfuramide	3688-53-7
Poly(diaminoethyl methacrylate, N-vinylpyrrolidone, dimethyl sulfate)	55008-57-6
N,N,N-Trimethyl-3-((2-methyl-1-oxo-2-propenyl)amino)-1-propanaminium chloride	131954-48-8
Gallic acid	149-91-7
Glycolic acid	79-14-1
Imidurea	39236-46-9
Lactic acid	50-21-5
Lauryl gallate	1166-52-5
Methenamine	100-97-0

methylisothiazolinone	2682-20-4
Methylparaben sodium	5026-62-0
Methylparaben	99-76-3
Monothioglycerol	96-27-5
Natamycin	7681-93-8
Nisin	1414-45-5
Octyl gallate	1034-01-1
o-Phenyl phenol	90-43-7
Phenol	108-95-2
Phenylethyl alcohol	60-12-8
Phenylmercuric acetate	62-38-4
Phenylmercuric nitrate	55-68-5
Phytate sodium	7205-52-9
Phytic acid	83-86-3
Pirodavir	124436-59-5
Polixetonium chloride	31512-74-0
Potassium acetate	127-08-2
Potassium hydrogen sulfite	7773-03-7
Potassium nitrate	7757-79-1
Potassium nitrite	7758-09-0
Potassium benzoate	582-25-2
Potassium metabisulfite	16731-55-8
Potassium propionate	327-62-8
potassium sorbate	590-00-1
Propionic acid	79-09-4
Propylparaben sodium	35285-69-9
Purpurogallin	569-77-7
Quaternium-15	4080-31-3
Sodium acetate	6131-90-4
Sodium benzoate	532-32-1
Sodium bisulfate	7681-38-1
Sodium bisulfite	7631-90-5
Sodium butylparaben	36457-20-2
sodium diacetate	126-96-5
Sodium ethylparaben	35285-68-8
Sodium Formaldehyde Sulfoxylate	6035-47-8
Sodium formate	141-53-7
Sodium metabisulfite	7681-57-4
Sodium Nitrite	7632-00-0
Sodium o-phenylphenate	132-27-4
Sodium propionate	6700-17-0
sodium sulfite	7757-83-7
Sorbic acid	110-44-1
Sulfur dioxide	7446-09-5
Thiabendazole	148-79-8
Thimerosal	54-64-8

SALES SPECIFICATION	
BIBLIOGRAPHY	FCC IV
APPEARANCE	White crystalline solid
ASSAY	99.0~101.0%
MELTING RANGE	132 - 135 C
WATER	0.5% max

ALDEHYDE	0.1% max
RESIDUE ON IGNITION	0.1% max
ARSENIC (as As)	3ppm max
HEAVY METALS (as Pb)	10ppm max
TRANSPORTATION	
PACKING	25kgs in fiber drum, 13mts in Container
HAZARD CLASS	Not regulated
UN NO.	
OTHER INFORMATION	