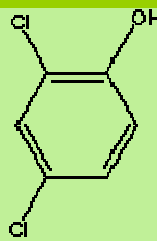
2,4-DICHLOROPHENOL



PRODUCT IDENTIFICATION	
CAS NO	120-83-2
EINECS NO.	204-429-6
FORMULA	$Cl_2C_6H_3OH$
MOL WT.	163
H.S. CODE	2908.10
TOXICITY	Oral rat LD50: 47 mg/kg
SYNONYMS	2,4-DCP; 4,6-Dichlorophenol; Isobac; 1-Hydroxy-2,4-dichlorobenzene; 2,4-Dichlorohydroxybenzene;
DERIVATION	
CLASSIFICATION	

PHYSICAL AND CHEMICAL PROPERTIES	
PHYSICAL STATE	white to off-white crystalline solid
MELTING POINT	42 - 44 C
BOILING POINT	209 - 210 C
SPECIFIC GRAVITY	1.383
SOLUBILITY IN WATER	Slightly soluble
SOLVENT SOLUBILITY	
pH	
VAPOR DENSITY	5.62
REFRACTIVE INDEX	
AUTOIGNITION	
NFPA RATINGS	Health: -; Flammability: 1; Reactivity: 0
FLASH POINT	113 C
STABILITY	Stable under ordinary conditions

APPLICATIONS

2,4-Dichlorophenol used to as an intermediate in making insecticides, herbicides, preservatives, antiseptics, disinfectants and other organic compounds.

SALES SPECIFICATION	
APPEARANCE	white to off-white crystalline solid
ASSAY	98.0% min
ISOMER IMPURITY	1.5% max
MELTING POINT	41 - 45 C

TRANSPORTATION	
PACKING	250kgs in drum
HAZARD CLASS	6.1 (Packing Group: III)
UN NO.	2020

GENERAL DESCRIPTION OF CHLOROPHENOL COMPOUNDS

Chlorophenols are organic halogen compounds of cyclic aromatics formed by replacing hydrogen atoms in phenol by 1-5 atoms of chlorine. There are 19 compounds of chlorophenols of three mono-, six isomeric substances each of di-, tri-, as well as three isomeric substances tetra-, and fully chlorinated pentachlorophenol.

Chlorinated phenol compounds are solids at room temperature, except 2-Monochlorophenol which melts at 8 C. They are toxic copounds. But the toxic property accounts for many of their uses. They are used as bactericides, fungicides and preservatives. The water solubility of chlorophenols is low. Most chlorophenols are commercially applied in the form of a chlorophenol-organic solvent formulation. The salt forms are useful in case of particularly tri- and tetrachlorophenols since salt forms are more soluble in water. Chlorinated phenols are weakly acidic, more acidic with more chlorinated. The octanol/water partition coefficients increases as chlorination increases. The taste and odour thresholds are quite low. Chlorophenols are prepared by the alkaline hydrolysis of the appropriate chlorobenzenes or by the direct stepwise

chlorination reaction of phenol or lower chlorinated phenols at a high temperature. Genrally, higher chlorinated phenols and their salt forms are used in wood preservation industry and in surface treatments for fresh-cut logs and lumber against sapstain fungi and mould. The lower chlorophenols serve as intermediates in the production of higher chlorophenols and various pesticides. 2-Chlorophenol is used for higher to 2,4-dichlorophenol, 2,4,6-trichlorophenol pentachlorophenol. 4-Chlorophenol is a starting material for making germicides such as 2-Benzyl-4-chlorophenol; it can also be converted to an analgesic of acetophenetidin. 2,4-Dichlorophenol with formaldehyde forms methylenebis compounds used as a mothproofing agent, an antiseptic, and a seed disinfectant. 2,4-Dichlorophenol, with chloroacetic acid, forms 2,4-Dichlorophenoxyacetic acid (2,4-D), used as a selective weed-killer, systemic herbicide and defoliant, also used to increase the latex output of old rubber trees and in fruit drop control. 2,4-Dichloropheno, with formaldehyde, forms methylenebis compounds used as a mothproofing agent, an antiseptic, and a seed disinfectant; 2,4-dichlorophenol, with chloroacetic acid, forms 2,4-Dichlorophenoxyacetic acid (2,4-D) used as a selective weed-killer, systemic herbicide and defoliant, also used to increase the latex output of old rubber trees and in fruit drop control. 2,4,6-Trichlorophenol is used as a bactericide and fungicide. The 2,4,5-isomer has similar applications and also can be converted into hexachlorophene or thiobis(trichlorophenol) used as germicides in soap; into dimethyl trichlorophenyl phosphorothioate, a systemic agent effective against grubs in cattle; into 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) or 2,4,5-Trichlorophenoxypropionic acid (2,4,5-TCPPA), both widely used as weed killers. Tetrachlorophenol is an insecticide and a bactericide and is used as a preservative for latex, wood, and leather. Pentachlorophenol is a disinfectant, a fungicide, and the most heavily used preservative for wood. It is primarily used to protect timber from fungal rot and wood-boring insects, but the technical material may also be extensively used in cooling towers of electric plants, as additives to adhesives based on starch and vegetable and animal protein, in shingles, brick walls, concrete blocks, insulation, pipe sealant compounds, photographic solutions, and textiles and in drilling mud in the petroleum industry.

2,4-DICHLOROPHENOL

CAS NUMBER : 120-83-2

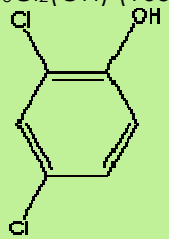
EINECS NUMBER : 204-429-6

OTHER NAME(S):
2,4-Dichlorohydroxybenzene; 2,4-DCP; 2,4-Dichlorfenol;4,6-Dichlorophenol; 1-Hydroxy-2,4-dichlorobenzene; NCI-C55345;

MAJOR USES:
Intermediate for production of 2,4-D and other related herbicides; ingredient of antiseptics; starting material higher chlorophenols; Intermediate for production of Sesone,Nitrofen, Nemacide; antihelminthic drug; polyester films; mothproofing; miticide;

ADDITIONAL INFORMATIO
Oral rat LD50: 47 mg/kg
UN Number: 2928 (Hazard Class: 6.1, Packing Group: III)
Packing: 50kgs in drum

$C_6H_3Cl_2(OH)$ (163.00)



PHYSICAL AND CHEMICAL PROPERTIES	
PHYSICAL STATE	white to yellow crystals
MELTING POINT	41 - 44 C
BOILING POINT	209 - 210 C
SPECIFIC GRAVITY	1.382
SOLUBILITY	Slightly soluble in water
REFRACTIVE INDEX	
FLASH POINT	104 C
SALES SPECIFICATION	
PURITY	99.0% min
MELTING POINT	41 - 44 C