Iodic acid hio3 structure

\n[toc title="Table of Contents"]\n

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1. Experimental Melting Point: \n \t
2. Experimental Gravity: \n \t
3. Appearance: \n \t
4. Stability: \n \t
5. Safety: \n

\n[/toc]\n \n

Contents

- Safety:

Molecular Formula	HIO_3
Average mass	175. 911 Da
Density	
Boiling Point	
Flash Point	
Molar Refractivity	

Polarizability

Surface Tension

Molar Volume

- Experimental data
- Predicted – ACD/Labs
- Predicted – EPISuite
- Predicted – ChemAxon
- Experimental Physico-chemical Properties
    - **Experimental Melting Point:**

      110 °C

      (Decomposes)Alfa

      Aesar

      110 °COxford

      University Chemical

      Safety Data (No longer

      updated)More details

      110 °CJean-Claude

      Bradley Open Melting

      Point Dataset15861

      110 °C

      (Decomposes)Alfa

Aesar87681, A11925

110

°CLabNetworkLN00193

322

- **Experimental Gravity:**

  4. 629 g/mLAlfa Aesar87681, A11925

- Miscellaneous

- **Appearance:**

  white crystalsOxford University Chemical Safety Data (No longer updated)More details

- **Stability:**

  Stable. Incompatible with strong reducing agents, alcohols, organic materials. Light-sensitive. Oxford University Chemical Safety Data (No longer

updated)More details

- **Safety:**

17-20-26-36/37/39-45-

60Alfa AesarA11925,

87681

5. 1Alfa AesarA11925

8/1/1934 12: 00: 00

AMAlfa AesarA11925,

87681

8-34Alfa AesarA11925

Aug-34Alfa

AesarA11925

DangerAlfa

AesarA11925

DANGER: OXIDIZER,

CORROSIVE, burns skin

and eyesAlfa

AesarA11925, 87681

H272-H314Alfa

AesarA11925

O, CAbblis

ChemicalsAB1006870

P221-P210-

P303+P361+P353-

P305+P351+P338-

P405-P501aAlfa

AesarA11925

Safety glasses,

adequate ventilation.

Oxford University

Chemical Safety Data

(No longer

updated)More details

Predicted data is generated using the ACD/Labs Percepta Platform – PhysChem Module

Density:

Boiling Point:

Vapour Pressure:

Enthalpy of Vaporization:

Flash Point:

Index of Refraction:	
Molar Refractivity:	
#H bond acceptors:	3
#H bond donors:	1
#Freely Rotating Bonds:	0
#Rule of 5 Violations:	
ACD/LogP:	
ACD/LogD (pH 5. 5):	
ACD/BCF (pH 5. 5):	
ACD/KOC (pH 5. 5):	
ACD/LogD (pH 7. 4):	
ACD/BCF (pH 7. 4):	
ACD/KOC (pH 7. 4):	
Polar Surface Area:	54 $Å^2$
Polarizability:	
Surface Tension:	

Molar Volume:

Predicted data is generated using the US Environmental Protection Agency's EPISuite™

Log Octanol-Water Partition Coef (SRC): Log Kow (KOWWIN v1. 67 estimate) = -4. 63Boiling Pt, Melting Pt, Vapor Pressure Estimations (MPBPWIN v1. 42): Boiling Pt (deg C): 534. 21 (Adapted Stein & Brown method)Melting Pt (deg C): 212. 06 (Mean or Weighted MP)VP(mm Hg, 25 deg C): 1. 71E-013 (Modified Grain method)Subcooled liquid VP: 1. 66E-011 mm Hg (25 deg C, Mod-Grain method)Water Solubility Estimate from Log Kow (WSKOW v1. 41): Water Solubility at 25 deg C (mg/L): 1e+006log Kow used: -4. 63 (estimated)no-melting pt equation usedWater Sol Estimate from Fragments: Wat Sol (v1. 01 est) = 1e+006 mg/LECOSAR Class Program (ECOSAR v0. 99h): Class(es) found: Neutral OrganicsHenrys Law Constant (25 deg C) [HENRYWIN v3. 10]: Bond Method : IncompleteGroup Method: IncompleteHenrys LC [VP/WSol estimate using EPI values]: 3. 958E-020 atm-m3/moleLog Octanol-Air Partition Coefficient (25 deg C) [KOAWIN v1. 10]: Can Not Estimate (can not calculate HenryLC)Probability of Rapid Biodegradation (BIOWIN v4. 10): Biowin1 (Linear Model) : 0. 6638Biowin2 (Non-Linear Model) : 0. 6250Expert Survey Biodegradation Results: Biowin3 (Ultimate Survey Model): 2. 8104 (weeks)Biowin4 (Primary Survey Model) : 3. 5939 (days-weeks)MITI Biodegradation Probability: Biowin5 (MITI Linear Model) : 0. 1888Biowin6 (MITI Non-Linear Model): 0. 0722Anaerobic Biodegradation Probability: Biowin7 (Anaerobic Linear Model): 0. 8361Ready Biodegradability Prediction: NOHydrocarbon Biodegradation (BioHCwin v1. 01): Structure incompatible with current estimation method! Sorption to aerosols (25 Dec C)[AEROWIN v1. 00]: Vapor pressure (liquid/subcooled): 2. 21E-009 Pa (1. 66E-011 mm Hg)Log Koa (): not availableKp (particle/gas partition coef. (m3/ug)): Mackay model : 1. 36E+003 Octanol/air (Koa) model: not availableFraction sorbed to airborne particulates (phi): Junge-Pankow model : 1 Mackay model : 1 Octanol/air (Koa) model: not availableAtmospheric Oxidation (25 deg C) [AopWin v1. 92]: Hydroxyl Radicals Reaction: OVERALL OH Rate Constant = 0. 1400 E-12 cm3/molecule-secHalf-Life = 76. 400 Days (12-hr day; 1. 5E6 OH/cm3)Ozone Reaction: No Ozone Reaction EstimationFraction sorbed to airborne particulates (phi): 1 (Junge, Mackay)Note: the sorbed fraction may be resistant to atmospheric oxidationSoil Adsorption Coefficient (PCKOCWIN v1. 66): Koc : 35. 04Log Koc: 1. 545 Aqueous Base/Acid-Catalyzed Hydrolysis (25 deg C) [HYDROWIN v1. 67]: Rate constants can NOT be estimated for this structure! Bioaccumulation Estimates from Log Kow (BCFWIN v2. 17): Log BCF from regression-based method = 0. 500 (BCF = 3. 162)log Kow used: -4. 63 (estimated)Volatilization from Water: Henry LC: 3. 96E-020 atm-m3/mole (calculated from VP/WS)Half-Life from Model River: 1. 962E+016 hours (8. 175E+014 days)Half-Life from Model Lake : 2. 14E+017 hours (8. 918E+015 days)Removal In Wastewater Treatment: Total removal: 1. 85 percentTotal biodegradation: 0. 09 percentTotal sludge adsorption: 1. 75 percentTotal to Air: 0. 00 percent(using 10000 hr Bio P, A, S)Level III Fugacity Model: Mass Amount Half-Life Emissions(percent) (hr) (kg/hr)Air 6. 93e-008 1. 83e+003 1000 Water 39 360 1000 Soil 60. 9 720 1000 Sediment 0. 0713 3. 24e+003 0 Persistence Time: 579 hr

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