

# [Silver bromide agbr structure](https://assignbuster.com/silver-bromide-agbr-structure/)

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

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1. [Experimental Melting Point:](#experimental-melting-point) \n \t
2. [Experimental Gravity:](#experimental-gravity) \n \t
3. [Experimental Solubility:](#experimental-solubility) \n \t
4. [Safety:](#safety) \n

\n[/toc]\n \n

Contents

* Safety:

|  |  |
| --- | --- |
| Molecular Formula  | AgBr  |
| Average mass  | 187. 772 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:

|  |
| --- |
| 432 °CAlfa Aesar  |
| 432 °CAlfa Aesar12110, 11425  |

## Experimental Gravity:

|  |
| --- |
| 6. 47 g/mLAlfa Aesar12110, 11425  |

## Experimental Solubility:

|  |
| --- |
| Practically insoluble in water. Insoluble in alcohol and acids. Partially soluble in ammoniaAlfa Aesar11425  |

* Miscellaneous

## Safety:

|  |
| --- |
| 50/53Alfa Aesar11425, 12110  |
| 57-60Alfa Aesar11425, 12110  |
| 9Alfa Aesar11425  |
| H400-H410Alfa Aesar11425  |
| IrritantSynQuestM047-9-03  |
| P273-P391-P501aAlfa Aesar11425  |
| WarningAlfa Aesar11425  |
| WARNING: Irritates skin and eyesAlfa Aesar11425, 12110  |

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:  | 0  |
| #H bond donors:  | 0  |
| #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:  | 0 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) = 0. 63Boiling Pt, Melting Pt, Vapor Pressure Estimations (MPBPWIN v1. 42): Boiling Pt (deg C): 519. 52 (Adapted Stein & Brown method)Melting Pt (deg C): 210. 30 (Mean or Weighted MP)VP(mm Hg, 25 deg C): 3. 1E-010 (Modified Grain method)Subcooled liquid VP: 2. 88E-008 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): 1. 465e+004log Kow used: 0. 63 (estimated)no-melting pt equation usedWater Sol Estimate from Fragments: Wat Sol (v1. 01 est) = 89954 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]: 5. 228E-015 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. 6582Biowin2 (Non-Linear Model) : 0. 5848Expert Survey Biodegradation Results: Biowin3 (Ultimate Survey Model): 2. 7842 (weeks )Biowin4 (Primary Survey Model) : 3. 5768 (days-weeks )MITI Biodegradation Probability: Biowin5 (MITI Linear Model) : 0. 1535Biowin6 (MITI Non-Linear Model): 0. 0524Anaerobic 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): 3. 84E-006 Pa (2. 88E-008 mm Hg)Log Koa (): not availableKp (particle/gas partition coef. (m3/ug)): Mackay model : 0. 781 Octanol/air (Koa) model: not availableFraction sorbed to airborne particulates (phi): Junge-Pankow model : 0. 966 Mackay model : 0. 984 Octanol/air (Koa) model: not availableAtmospheric Oxidation (25 deg C) [AopWin v1. 92]: Hydroxyl Radicals Reaction: OVERALL OH Rate Constant = 0. 0000 E-12 cm3/molecule-secHalf-Life = -------Ozone Reaction: No Ozone Reaction EstimationFraction sorbed to airborne particulates (phi): 0. 975 (Junge, Mackay)Note: the sorbed fraction may be resistant to atmospheric oxidationSoil Adsorption Coefficient (PCKOCWIN v1. 66): Koc : 14. 3Log Koc: 1. 155 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: 0. 63 (estimated)Volatilization from Water: Henry LC: 5. 23E-015 atm-m3/mole (calculated from VP/WS)Half-Life from Model River: 1. 535E+011 hours (6. 394E+009 days)Half-Life from Model Lake : 1. 674E+012 hours (6. 975E+010 days)Removal In Wastewater Treatment: Total removal: 1. 86 percentTotal biodegradation: 0. 09 percentTotal sludge adsorption: 1. 77 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 5. 25e-006 1e+005 1000 Water 36. 9 360 1000 Soil 63 720 1000 Sediment 0. 0702 3. 24e+003 0 Persistence Time: 593 hr

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