NAME

kh − compute the Henry constant in water or heavy water.

LIBRARY

iapws library (*libiapws*, −*liapws*)

SYNOPSIS

Fortran **pure subroutine Kw(***T*,*rhow*,*k***)**

real(dp), intent(in) ::*T(:)*

real(dp), intent(in) :: *rhow(:)*

real(dp), intent(out) :: *k(:)*

C **void iapws_r1124_Kw(size_t** *N*,**double ***T*,**double ****rhow*,**double ****k***);**

Python **Kw(***T:***np.ndarray,***rhow:***np.ndarray)->Union[np.ndarray,float]:**

DESCRIPTION

Compute the ionization constant of water *Kw*.

Arguments:

T(:)	Temperature in K.
rhow	Mass density in g.cmˆ-3.
k(:)	Ionisation constant.

Validity range:

- 273.13 K <= T <= 1273.15 K
- 0 <= p <= 1000 MPa).

RETURN VALUE

k is filled with NaN if out of validity range.

EXAMPLES

Fortran:

```
use iapws
real(dp) :: T(1), k(1), rhow(1)
T(1) = 25.0_dp + 273.15_dp
rhow(1) = 1.0_dp
call Kw(T, rhow, 0, k)
```

C:

```
#include "iapws.h"
double T = 25.0 + 273.15;
double rhow = 1.0;
double k;
void iapws_r1124_Kw(1, &T, &rhow, &k)
```

Python:

```
import numpy as np
import pyiapws
T = np.asarray([25.0])
rhow = np.asarray([1.0])
k = pyiapws.Kw(T+273.15, rhow)
print(k)
```

SEE ALSO

iapws(1) **iapws_lib**(3) **iapws_psat**(3) **iapws_Tsat**(3) **iapws_kh**(3) **iapws_kd**(3) **iapws_kw**(3) **iapws_Tc**(3) **iapws_pc**(3) **ciaaw**(3), **codata**(3),