

NAG Toolbox for MATLAB

x02ak

1 Purpose

x02ak returns the smallest positive floating-point number.

2 Syntax

```
[result] = x02ak()
```

3 Description

x02ak returns the smallest positive number in the model of floating-point arithmetic described in the X02 Chapter Introduction. The returned value is equal to $b^{e_{\min}-1}$, where b is the arithmetic base (see x02bh) and $e_{\min}$ is the minimum exponent (see x02bk) in the model.

4 References

None.

5 Parameters

5.1 Compulsory Input Parameters

None.

5.2 Optional Input Parameters

None.

5.3 Input Parameters Omitted from the MATLAB Interface

None.

5.4 Output Parameters

1: **result** – double scalar

The result of the function.

6 Error Indicators and Warnings

None.

7 Accuracy

None.

8 Further Comments

None.

9 Example

```
[result] = x02ak()  
result =  
    2.2251e-308
```
