## amides

1. Derivatives of oxoacids  $R_k E(=O)_l(OH)_m$  ( $l \neq 0$ ) in which an acidic hydroxy group has been replaced by an amino or substituted amino group. Chalcogen replacement analogues are called thio-, seleno- and telluro-amides. Compounds having one, two or three acyl groups on a given nitrogen are generically included and may be designated as primary, secondary and tertiary amides, respectively, e.g.

benzamide,

$$H_3C-S-N$$
O
 $CH_3$ 
O
 $CH_3$ 

*N*,*N*-dimethylmethanesulfonamide,

$$R \xrightarrow{\mathsf{H}} 0 \qquad 0 \qquad \mathsf{R}$$

secondary amides (see imides ),

$$\begin{array}{c|c}
R & O \\
R & N & R \\
O & O
\end{array}$$

tertiary amides,

## Notes:

- 1. Amides with NH<sub>2</sub>, NHR and NR<sub>2</sub> groups should not be distinguished by means of the terms primary, secondary and tertiary.
- 2. Derivatives of certain acidic compounds  $R_nE(OH)_m$ , where E is not carbon (e.g. sulfenic acids, RSOH, phosphinous acids,  $R_2POH$ ) having the structure  $R_nE(NR_2)_m$  may be named as amides but do not belong to the class amides proper, e.g.  $CH_3CH_2SNH_2$  ethanesulfenamide or ethylsulfanylamine.
- 2. The term applies also to metal derivatives of ammonia and amines, in which a cation replaces a hydrogen atom on nitrogen. Such compounds are also called azanides, e.g.

$$\bigvee^{Li}_{I}$$

lithium diisopropylamide, synonym lithium diisopropylazanide.

See also: carboxamides, lactams, peptides, phosphoramides, sulfonamides

## Source:

PAC, 1995, 67, 1307 (Glossary of class names of organic compounds and reactivity intermediates based on structure (IUPAC Recommendations 1995)) on page 1315

## See also:

PAC, 1993, 65, 1357 (Revised nomenclature for radicals, ions, radical ions and related species (IUPAC Recommendations 1993)) on page 1357