

**CLASSIFICATION AND USER LABELLING**  
**INFORMATION CONCERNING THE HEALTH EFFECTS**  
**OF MAJOR PETROLEUM ADDITIVE COMPONENTS**

ATC DOCUMENT 43 - REVISION 3

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# CLASSIFICATION AND USER LABELLING INFORMATION CONCERNING THE HEALTH EFFECTS OF MAJOR PETROLEUM ADDITIVE COMPONENTS

## 1. EXPLANATORY COMMENTS

ATC Document 31 describes an internationally recognized nomenclature system for major petroleum additive components. The present paper reviews classification and user labelling information concerning health effects for each class of components described therein. Information on classification and labelling with respect to danger for the environment will be found in ATC Document 50. For complete classification and labelling, reference must be made to both Documents. The danger symbols and risk phrases presented in this document are assigned in accordance with the Dangerous Substances Directive (67/548/EEC) and the Dangerous Preparations Directives (88/379/EEC prior to 30th July 2002 and 99/45/EC thereafter).

Many petroleum additive components are preparations consisting of an active ingredient dissolved in an oil or other hydrocarbon base. They are not generally pure chemicals and may contain, inter alia, small amounts of materials generated as by-products during their manufacture. Care must therefore be taken in classifying and labelling them to ensure that the effects of any by-products or impurities present are taken into account. This is especially true with respect to small quantities of sensitizers that may be present, for which the 1999 DPD has a label declaration limit of 0.1%.

Each ATC additive class describes a number of related components. There will be some gradation and variation in both physicochemical and toxicological properties within a class. This is normal for related organic chemicals (with some recognized exceptions). In the case of petroleum additives, some member companies have tested components and found them to be non-dangerous according to EC criteria; other companies have tested different but similar components within the same class and have identified a toxicological hazard. In such cases, the range of hazards is described in this Document and ordered in accordance with the applicable directive. Risk phrases are listed in ascending numerical order.

Member companies of ATC recognize their obligations to conduct investigations to make themselves aware of relevant and accessible data that exist concerning the properties of their products. ATC, in conjunction with its member companies, undertakes to ensure that a class of components will not be described as 'not classified as dangerous' unless all ATC member companies are satisfied that such classification is appropriate to all additive components represented by that particular class. All member companies have agreed to report to the ATC Health and Safety Legislation Sub-Committee, as a matter of urgency, any newly identified toxicological hazards. Labelling information on the affected class of components will be reviewed and amended as required.

Safety data sheets are available for all petroleum additive products supplied by ATC member companies. It is recommended that these sheets should always be consulted prior to product handling.

## 2. AUTHORIZED EXTERNAL DISTRIBUTION:

This document is included, by permission of ATC, in the TOMES Plus INFOTEXT Information System published by MICROMEDEX, Inc. Any future revisions of ATC Document 43 should be sent to Dr Alan Hall at MICROMEDEX, Inc., 6200 S. Syracuse Way, Suite 300, Englewood, Colorado 8011-4741, USA, for inclusion in that database.

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N.B. Always refer to Supplier's Safety Data Sheet before handling product.

COMPONENT CLASS	RANGE OF POSSIBLE CLASSIFICATIONS	
	SYMBOL <sup>1</sup>	RISK PHRASE <sup>2</sup>
<u>ZINC AND OTHER OXYPHOSPHORUS ADDITIVES:</u>		
Zinc alkaryl dithiophosphate	Not classified as dangerous	
Zinc alkyl dithiophosphate	Not classified as dangerous	
	Xn	R20-36/37/38
	Xi	R36
	Xi	R36/38
	Xi	R38-41
	Not classified as dangerous	
<u>METAL-CONTAINING ADDITIVES:</u>		
Barium long-chain alkaryl sulphonate	Xn	R20/22
Calcium long-chain alkaryl sulphonate	Xi	R36
	Xi	R43
	Not classified as dangerous	
Calcium long-chain alkyl phenate	Not classified as dangerous	
Calcium long-chain alkyl phenate sulphide	Xi	R38
	Not classified as dangerous	
Calcium long-chain alkyl salicylate	Not classified as dangerous	
Magnesium long-chain alkaryl sulphonate	Xi	R43
	Not classified as dangerous	
Magnesium long-chain alkyl phenate sulphide	Not classified as dangerous	
Magnesium long-chain alkyl salicylate	Not classified as dangerous	
Sodium long-chain alkaryl sulphonate	C	R34
	Xi	R36/38
	Xi	R38-41
	Not classified as dangerous	
<u>NITROGEN-CONTAINING ADDITIVES:</u>		
Alkyl dithio thiazazole	Xi	R43
	Not classified as dangerous	
Long-chain alkaryl polyether amidoamine	Xi	R38
Long-chain alkylpolyamide amine	Xi	R36/38
Polyalkyl amino phenol	Xn	R38-42/43
	Xi	R43

Polyolefin amide alkyleneamine	Not classified as dangerous	
Polyolefin amide alkyleneamine borate	Not classified as dangerous	
Polyolefin amine	Xi	R38
	Not classified as dangerous	
<b>SULPHIDES, PHOSPHOSULPHIDES AND HALOGEN-CONTAINING ADDITIVES:</b>		
Polyolefin phosphorusulphide	Not classified as dangerous	
Polyolefin sulphide	Not classified as dangerous	
<b>POLYMERIC ADDITIVES:</b>		
Alkaryl polyether	Xn	R22
	Xi	R36
	Xi	R36/38
Long-chain alkaryl polyether	Xi	R36
	Xi	R38
Alkyl ester copolymer	Xi	R43
	Not classified as dangerous	
Aryl polyolefin	Not classified as dangerous	
Hydrocarbon polymer	Not classified as dangerous	
Olefin/alkyl ester copolymer	Not classified as dangerous	
Poly long-chain alkyl methacrylate	Xi	R43
	Not classified as dangerous	
Polyether	Not classified as dangerous	
Polyolefin	Xn	R20
	Not classified as dangerous	
Polyolefin ester		
Polyalkylene glycol	Xn	R22
	Xi	R36/38
	Aerosol inhalation hazard with 50/50 ethylene/propylene oxide copolymers in MW range 1700-4000	
<b>OTHER ADDITIVES:</b>		
Alkyl phenol	Xn	22
	Xi	36/38
	Not classified as dangerous	
Long-chain alkane	Not classified as dangerous	
Long-chain alkaryl sulphonic acid	C	R34
	Xi	R36//3738
Long-chain alkyl carboxylic acid	Xi	R36//3738
	Xi	R36/38
Long-chain ester	Not classified as dangerous	

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<sup>1</sup> Symbols:           Xi = irritant  
                          Xn = harmful  
                          C = corrosive

<sup>2</sup> Risk Phrases:       R20 = harmful by inhalation  
                          R22 = harmful if swallowed  
                          R34 = causes burns  
                          R36 = irritating to eyes  
                          R37 = irritating to respiratory system  
                          R38 = irritating to skin  
                          R41 = risk of serious damage to eyes  
                          R42 = may cause sensitization by inhalation  
                          R43 = may cause sensitization by skin contact