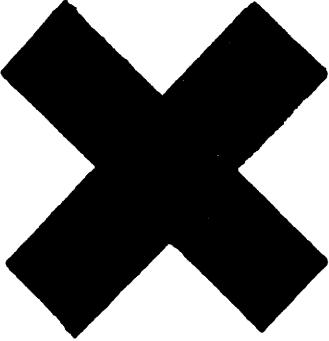






KOMMISSIONEN FOR DE EUROPÆISKE FÆLLESSKABER
KOMMISSION DER EUROPÄISCHEN GEMEINSCHAFTEN
ΕΠΙΤΡΟΠΗ ΤΩΝ ΕΥΡΩΠΑΪΚΩΝ ΚΟΙΝΟΤΗΤΩΝ
COMMISSION OF THE EUROPEAN COMMUNITIES
COMMISSION DES COMMUNAUTÉS EUROPÉENNES
COMMISSIONE DELLE COMUNITÀ EUROPEE
COMMISSIE VAN DE EUROPESE GEMEENSCHAPPEN

EINSTUFUNG UND KENNZEICHNUNG GEFÄHRLICHER STOFFE

CLASSIFICATION ET ETIQUETAGE DE SUBSTANCES DANGEREUSES

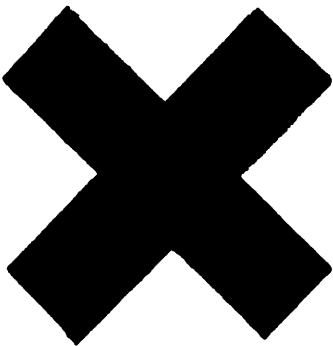


	<p>Lokalirriterende Reizend Ερεθιστικό Irritant Irritant Irritante Irriterend</p>	
		<p>Giftig Giftig Τοξικό Toxic Toxique Tossico Vergiftig</p>
	<p>Let antændelig Leichtentzündlich Λίαν εύφλεκτο Highly flammable Facilement inflammable Facilmente infiammabile Licht ontvlambaar</p>	



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XI/316/84-EN

EINSTUFUNG UND KENNZEICHNUNG GEFÄHRLICHER STOFFE
CLASSIFICATION AND LABELLING OF DANGEROUS SUBSTANCES
CLASSIFICATION ET ETIQUETAGE DE SUBSTANCES DANGEREUSES

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Purpose of the present document

Council Directive 67/548/EEC of 27 June 1967 has been amended 6 times. The latest version is known as the Sixth Amendment and was adopted as Council Directive 79/831/EEC on 18 September 1979.

Furthermore, up to now, Directive 67/548/EEC has been adapted to technical progress 5 times by Commission Directives.

In these adaptations to technical progress certain Annexes, which relate to the classification and labelling of dangerous substances have been modified or updated :

- Annex I, containing substances which are classified and labelled in a uniform manner in the Community
- Annex II, containing the symbols and indication of danger
- Annex III, containing the Nature of special risks attaching to dangerous substances (R-phrases)
- Annex IV, containing the safety advice concerning dangerous substances (S-phrases)
- Annex VI (part II), containing classification and labelling requirements and criteria and the Labelling Guide.

The present document contains the updated versions of Annexes II, III and IV in the seven official languages of the Community and Annex VI in English.

However, it was not possible to include Annex I in this brochure as it contains about 1 000 substances covering 500 pages.

A special publication of an updated version of Annex I is foreseen at a later date.

Directives relating to the classification and labelling
of dangerous substances

Council Directive 67/548/EEC of 27 June 1967

Official Journal 196 of 16.08.1967

(Council Directive of 27 June 1967 on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances)

Last amended by the "Sixth Amendment" :

Council Directive 79/831/EEC of 18 September 1979

Official Journal L 259 of 15.10.1979

(Council Directive of 18 September 1979 amending for the sixth time Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances)

Adaptations of these Directives to technical progress :

1. Adaptation :

Commission Directive 76/907/EEC of 14 July 1976

Official Journal L 360 of 30.12.1976

2. Adaptation :

Commission Directive 79/370/EEC of 30 January 1979

Official Journal L 88 of 7.04.1979

3. Adaptation :

Commission Directive 81/957/EEC of 23 October 1981

Official Journal L 351 of 7.12.1981

4. Adaptation :

Commission Directive 82/232/EEC of 25 March 1982

Official Journal L 106 of 21.04.1982

5. Adaptation (Labelling Guide) :

Commission Directive 83/467/EEC of 29 July 1983

Official Journal L 257 of 16.09.1983

(Commission Directive of 29 July 1983 adapting to technical progress for the fifth time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances).

The main objective of the fifth adaptation to technical progress was the publication of the Labelling Guide.

BILAG II**Faresymboler og farebetegnelser****ANHANG II****Gefahrensymbole und -bezeichnungen****ΠΑΡΑΡΤΗΜΑ II****Σύμβολα και ενδείξεις κινδύνου****ANNEX II****Symbols and indications of danger****ANNEXE II****Symboles et indications de danger****ALLEGATO II****Simboli e indicazioni di rischio****BIJLAGE II****Gevaarsymbolen en -aanduidingen**

Bemærk: Bogstaverne E, O, F, F+, T, T+, C, Xn, Xi indgår ikke i symbolet.

Anmerkung: Die Buchstaben E, O, F, F+, T, T+, C, Xn, Xi, sind nicht Bestandteil des Gefahrensymbols.

Σημείωση: Τα γράμματα E, O, F, F+, T, T+, C, Xn, Xi δεν αποτελούν μέρος του συμβόλου.

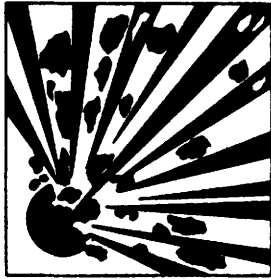
Note: The letters E, O, F, F+, T, T+, C, Xn, Xi do not form part of the symbol.

Remarque: Les lettres E, O, F, F+, T, T+, C, Xn, Xi ne font pas partie du symbole.

Nota: Le lettere E, O, F, F+, T, T+, C, Xn, Xi non fanno parte del simbolo.

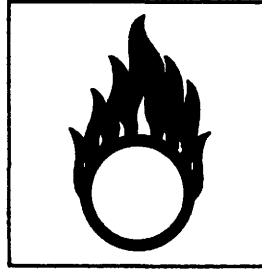
Opmerking: De letters E, O, F, F+, T, T+, C, Xn, Xi maken geen deel uit van het symbool.

E



Eksplziv
Explosionsgefährlich
Εκρηκτικό
Explosive
Explosif
Esplosivo
Ontplofbaar

O



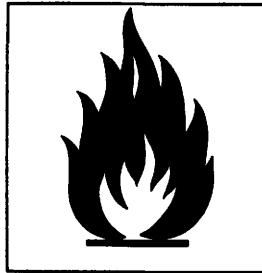
Brandnærende (oxiderende)
Brandfrdernd
Οξειδωτικό
Oxidizing
Comburant
Comburente
Oxyderend

F



Let antændelig
Leichtentzündlich
Λιαν εύφλεκτο
Highly flammable
Facilement inflammable
Facilmente infiammabile
Licht ontvlambaar

F+



Yderst let antændelig
Hochentzündlich
Εξόχως εύφλεκτο
Extremely flammable
Extrmement inflammable
Estremamente infiammabile
Zeer licht ontvlambaar

T



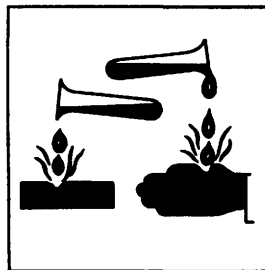
Giftig
Gftig
Τοξικό
Toxic
Toxique
Tossico
Vergiftig

T+



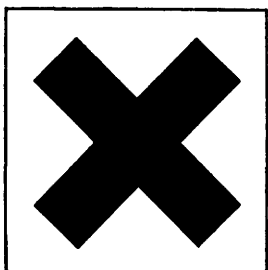
Meget giftig
Sehr giftig
Λιαν τοξικό
Very toxic
Trs toxique
Molto tossico
Zeer vergiftig

C



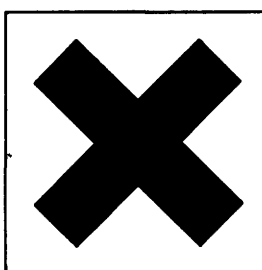
Ætsende
tzend
Διαβρωτικό
Corrosive
Corrosif
Corrosivo
Corrosief

Xn



Sundhedsskadelig
Gesundheitsschdlich
Επιβλαβς
Harmful
Nocif
Nocivo
Schadelijk

Xi



Lokalirriterende
Reizend
Ερεθιστικό
Irritant
Irritant
Irritante
Irriterend

BILAG III

Arten af de særlige risici, der er forbundet med de farlige stoffer

ANLAGE III

Bezeichnungen der besonderen Gefahren bei gefährlichen Stoffen

ΠΑΡΑΡΤΗΜΑ ΙΙΙ

Φύση των ειδικών κινδύνων που αφορούν επικίνδυνες ουσίες

ANNEX III

Nature of the special risks attaching to dangerous substances

ANNEXE III

Nature des risques particuliers attribués aux substances dangereuses

ALLEGATO III

Natura dei rischi specifici attribuiti alle sostanze pericolose

BIJLAGE III

Aard der bijzondere gevaren toegeschreven aan gevaarlijke stoffen

- R 1** Eksplosiv i tór tilstand.
In trockenem Zustand explosionsgefährlich .
Εκρηκτικό σε ξηρή κατάσταση.
Explosive when dry.
Explosif à l'état sec.
Esplosivo allo stato secco.
In droge toestand ontplofbaar.
- R 2** Eksplosionsfarlig ved stød, gnidning, ild eller andre antændelseskilder.
Durch Schlag, Reibung, Feuer oder andere Zündquellen explosionsgefährlich .
Κίνδυνος εκρήξεως από τράνταγμα, τριβή, φωτιά ή άλλες πηγές αναφλέξεως.
Risk of explosion by shock, friction, fire or other sources of ignition.
Risque d'explosion par le choc, la friction, le feu ou autres sources d'ignition.
Rischio di esplosione per urto, sfregamento, fuoco o altre sorgenti d'ignizione.
Ontploffingsgevaar door schok, wrijving, vuur of andere ontstekingsoorzaken.
- R 3** Meget eksplosionsfarlig ved stød, gnidning, ild eller andre antændelseskilder.
Durch Schlag, Reibung, Feuer oder andere Zündquellen besonders explosionsgefährlich .
Πολύ μεγάλος κίνδυνος εκρήξεως από τράνταγμα, τριβή, φωτιά ή άλλες πηγές αναφλέξεως.
Extreme risk of explosion by shock, friction, fire or other sources of ignition.
Grand risque d'explosion par le choc, la friction, le feu ou autres sources d'ignition.
Elevato rischio di esplosione per urto, sfregamento, fuoco o altre sorgenti d'ignizione.
Ernstig ontploffingsgevaar door schok, wrijving, vuur of andere ontstekingsoorzaken.
- R 4** Danner meget følsomme eksplosive metalforbindelser.
Bildet hochempfindliche explosionsgefährliche Metallverbindungen.
Σχηματίζει πολύ ευαίσθητες εκρηκτικές μεταλλικές ενώσεις.
Forms very sensitive explosive metallic compounds.
Forme des composés métalliques explosifs très sensibles.
Forma composti metallici esplosivi molto sensibili.
Vormt met metalen zeer gemakkelijk ontplofbare verbindingen.

- R 5** Eksplosionsfarlig ved opvarmning.
Beim Erwärmen explosionsfähig.
Θέρμανση μπορεί να προκαλέσει έκρηξη.
Heating may cause an explosion.
Danger d'explosion sous l'action de la chaleur.
Pericolo di esplosione per riscaldamento.
Ontploffingsgevaar door verwarming.
- R 6** Eksplosiv ved og uden kontakt med luft.
Mit und ohne Luft explosionsfähig.
Εκρηκτικό σε επαφή ή χωρίς επαφή με τον αέρα.
Explosive with or without contact with air.
Danger d'explosion en contact ou sans contact avec l'air.
Esplosivo a contatto o senza contatto con l'aria.
Ontploffbaar met en zonder lucht.
- R 7** Kan forårsage brand.
Kann Brand verursachen.
Μπορεί να προκαλέσει πυρκαϊά.
May cause fire.
Peut provoquer un incendie.
Può provocare un incendio.
Kan brand veroorzaken.
- R 8** Brandfarlig ved kontakt med brændbare stoffer.
Feuergefahr bei Berührung mit brennbaren Stoffen.
Μπορεί να προκαλέσει την ανάφλεξη καυσίμων υλικών σε επαφή με αυτά.
Contact with combustible material may cause fire.
Favorise l'inflammation des matières combustibles.
Può provocare l'accensione di materie combustibili.
Bevordert de ontbranding van brandbare stoffen.
- R 9** Eksplosionsfarlig ved blanding med brændbare stoffer.
Explosionsgefahr bei Mischung mit brennbaren Stoffen.
Εκρηκτικό όταν αναμιχθεί με καύσιμα υλικά.
Explosive when mixed with combustible material.
Peut exploser en mélange avec des matières combustibles.
Esplosivo in miscela con materie combustibili.
Ontploffingsgevaar bij menging met brandbare stoffen.
- R 10** Brandfarlig.
Entzündlich.
Εύφλεκτο.
Flammable.
Inflammable.
Infiammabile.
Ontvlambaar.

- R 11** Meget brandfarlig.
Leichtentzündlich.
Λίαν εύφλεκτο.
Highly flammable.
Très inflammable.
Facilmente infiammabile.
Licht ontvlambaar.
- R 12** Yderst brandfarlig.
Hochentzündlich.
Εξόχως εύφλεκτο.
Extremely flammable.
Extrêmement inflammable.
Altamente infiammabile.
Zeer licht ontvlambaar.
- R 13** Yderst brandfarlig flydende gas.
Hochentzündliches Flüssiggas.
Εξόχως εύφλεκτο υγροποιημένο αέριο.
Extremely flammable liquefied gas.
Gaz liquéfié extrêmement inflammable.
Gas liquefatto altamente infiammabile.
Zeer licht ontvlambaar vloeibaar gas.
- R 14** Reagerer voldsomt med vand.
Reagiert heftig mit Wasser.
Αντιδρά βίαια με νερό.
Reacts violently with water.
Réagit violemment au contact de l'eau.
Reagisce violentemente con l'acqua.
Reageert heftig met water.
- R 15** Reagerer med vand under dannelsen af yderst brandfarlige gasser.
Reagiert mit Wasser unter Bildung leicht entzündlicher Gase.
Σε επαφή με νερό ελευθερώνονται πολύ εύφλεκτα αέρια.
Contact with water liberates highly flammable gases.
Au contact de l'eau dégage des gaz très inflammables.
A contatto con l'acqua libera gas facilmente infiammabili.
Vormt licht ontvlambaar gas in contact met water.
- R 16** Eksplosionsfarlig ved blanding med oxiderende stoffer.
Explosionsgefährlich in Mischung mit brandfördernden Stoffen.
Εκρηκτικό όταν αναμιχθεί με οξειδωτικές ουσίες.
Explosive when mixed with oxidising substances.
Peut exploser en mélange avec des substances comburantes.
Pericolo di esplosione se mescolato con sostanze comburenti.
Ontploffingsgevaar bij menging met oxyderende stoffen.

- R 17** Selvantændelig i luft.
Selbstentzündlich an der Luft.
Αυτοαναφλέγεται στον αέρα.
Spontaneously flammable in air.
Spontanément inflammable à l'air.
Spontaneamente infiammabile all'aria.
Spontaan ontvlambaar in lucht.
- R 18** Ved brug kan brændbare dampe/eksplosive damp-luftblandinger dannes.
Bei Gebrauch Bildung explosiver/leichtentzündlicher Dampf-Luftgemische möglich.
Κατά την χρήση μπορεί να σχηματίσει εύφλεκτα/εκρηκτικά μίγματα ατμού-αέρος.
In use, may form flammable/explosive vapour-air mixture.
Lors de l'utilisation, formation possible de mélange vapeur-air inflammable/explosif.
Durante l'uso può formare con aria miscele esplosive/infiammabili.
Kan bij gebruik een ontvlambaar/ontplofbaar damp-luchtmengsel vormen.
- R 19** Kan danne eksplosive peroxider.
Kann explosionsfähige Peroxyde bilden.
Μπορεί να σχηματίσει εκρηκτικά υπεροξείδια.
May form explosive peroxides.
Peut former des peroxydes explosifs.
Può formare perossidi esplosivi.
Kan ontplofbare peroxiden vormen.
- R 20** Farlig ved indånding.
Gesundheitsschädlich beim Einatmen.
Βλαβερό όταν εισπνέεται.
Harmful by inhalation.
Nocif par inhalation.
Nocivo per inalazione.
Schadelijk bij inademing.
- R 21** Farlig ved berøring med huden.
Gesundheitsschädlich bei Berührung mit der Haut.
Βλαβερό σε επαφή με το δέρμα.
Harmful in contact with skin.
Nocif par contact avec la peau.
Nocivo a contatto con la pelle.
Schadelijk bij aanraking met de huid.

- R 22 Farlig ved indtagelse.
Gesundheitsschädlich beim Verschlucken.
Βλαβερό σε περίπτωση καταπόσεως.
Harmful if swallowed.
Nocif en cas d'ingestion.
Nocivo per ingestione.
Schadelijk bij opname door de mond.
- R 23 Giftig ved indånding.
Giftig beim Einatmen.
Τοξικό όταν εισπνέεται.
Toxic by inhalation.
Toxique par inhalation.
Tossico per inalazione.
Vergiftig bij inademing.
- R 24 Giftig ved berøring med huden.
Giftig bei Berührung mit der Haut.
Τοξικό σε επαφή με το δέρμα.
Toxic in contact with skin.
Toxique par contact avec la peau.
Tossico a contatto con la pelle.
Vergiftig bij aanraking met de huid.
- R 25 Giftig ved indtagelse.
Giftig beim Verschlucken.
Τοξικό σε περίπτωση καταπόσεως.
Toxic if swallowed.
Toxique en cas d'ingestion.
Tossico per ingestione.
Vergiftig bij opname door de mond.
- R 26 Meget giftig ved indånding.
Sehr giftig beim Einatmen.
Πολύ τοξικό όταν εισπνέεται.
Very toxic by inhalation.
Très toxique par inhalation.
Altamente tossico per inalazione.
Zeer vergiftig bij inademing.
- R 27 Meget giftig ved berøring med huden.
Sehr giftig bei Berührung mit der Haut.
Πολύ τοξικό σε επαφή με το δέρμα.
Very toxic in contact with skin.
Très toxique par contact avec la peau.
Altamente tossico a contatto con la pelle.
Zeer vergiftig bij aanraking met de huid.

- R 28** Meget giftig ved indtagelse.
Sehr giftig beim Verschlucken.
Πολύ τοξικό σε περίπτωση καταπόσεως.
Very toxic if swallowed.
Très toxique en cas d'ingestion.
Altamente tossico per ingestione.
Zeer vergiftig bij opname door de mond.
- R 29** Udvikler giftig gas ved kontakt med vand.
Entwickelt bei Berührung mit Wasser giftige Gase.
Σε επαφή με το νερό ελευθερώνονται τοξικά αέρια.
Contact with water liberates toxic gas.
Au contact de l'eau, dégage des gaz toxiques.
A contatto con l'acqua libera gas tossici.
Vormt vergiftig gas in contact met water.
- R 30** Kan blive meget brandfarlig under brug.
Kann bei Gebrauch leicht entzündlich werden.
Κατά την χρήση γίνεται λίαν εύφλεκτο.
Can become highly flammable in use.
Peut devenir très inflammable pendant l'utilisation.
Può divenire facilmente infiammabile durante l'uso.
Kan bij gebruik licht ontvlambaar worden.
- R 31** Udvikler giftig gas ved kontakt med syre.
Entwickelt bei Berührung mit Säure giftige Gase.
Σε επαφή με οξέα ελευθερώνονται τοξικά αέρια.
Contact with acids liberates toxic gas.
Au contact d'un acide dégage un gaz toxique.
A contatto con acidi libera gas tossico.
Vormt vergiftige gassen in contact met zuren.
- R 32** Udvikler meget giftig gas ved kontakt med syre.
Entwickelt bei Berührung mit Säure sehr giftige Gase.
Σε επαφή με οξέα ελευθερώνονται πολύ τοξικά αέρια.
Contact with acids liberates very toxic gas.
Au contact d'un acide dégage un gaz très toxique.
A contatto con acidi libera gas altamente tossico.
Vormt zeer vergiftige gassen in contact met zuren.
- R 33** Fare for kumulativ virkning.
Gefahr kumulativer Wirkungen.
Κίνδυνος αθροιστικών επιδράσεων.
Danger of cumulative effects.
Danger d'effets cumulatifs.
Pericolo di effetti cumulativi.
Gevaar voor cumulatieve effecten.

- R 34** Ætsningsfare.
Verursacht Verätzungen.
Προκαλεί εγκαύματα.
Causes burns.
Provoque des brûlures.
Provoca ustioni.
Veroorzaakt brandwonden.
- R 35** Alvorlig ætsningsfare.
Verursacht schwere Verätzungen.
Προκαλεί σοβαρά εγκαύματα.
Causes severe burns.
Provoque de graves brûlures.
Provoca gravi ustioni.
Veroorzaakt ernstige brandwonden.
- R 36** Irriterer øjnene.
Reizt die Augen.
Ερεθίζει τα μάτια.
Irritating to eyes.
Irritant pour les yeux.
Irritante per gli occhi.
Irriterend voor de ogen.
- R 37** Irriterer åndedrætsorganerne.
Reizt die Atmungsorgane.
Ερεθίζει το αναπνευστικό σύστημα.
Irritating to respiratory system.
Irritant pour les voies respiratoires.
Irritante per le vie respiratorie.
Irriterend voor de ademhalingswegen.
- R 38** Irriterer huden.
Reizt die Haut.
Ερεθίζει το δέρμα.
Irritating to skin.
Irritant pour la peau.
Irritante per la pelle.
Irriterend voor de huid.
- R 39** Fare for uhelbredelig skadevirkning.
Ernste Gefahr irreversiblen Schadens.
Κίνδυνος πολύ σοβαρών μονίμων επιδράσεων.
Danger of very serious irreversible effects.
Danger d'effets irréversibles très graves.
Pericolo di effetti irreversibili molto gravi.
Gevaar voor ernstige onherstelbare effekten.

- R 40** Mulig fare for uhelbredelig skadevirkning.
Irreversibler Schaden möglich.
Πιθανοί κίνδυνοι μόνιμων επιδράσεων.
Possible risks of irreversible effects.
Possibilité d'effets irréversibles.
Possibilità di effetti irreversibili.
Onherstelbare effekten zijn niet uitgesloten.
- R 41** Risiko for alvorlig øjenskade.
Gefahr ernster Augenschäden.
Κίνδυνος σοβαρών οφθαλμικών βλαβών.
Risk of serious damage to eyes.
Risque de lésions oculaires graves.
Rischio di gravi lesioni oculari.
Gevaar voor ernstig oogletsel.
- R 42** Kan forårsage overfølsomhed ved indånding.
Sensibilisierung durch Einatmen möglich.
Δύναται να προκαλέσει ευαισθητοποίηση δια της εισπνοής.
May cause sensitization by inhalation.
Peut entraîner une sensibilisation par inhalation.
Può provocare sensibilizzazione per inalazione.
Kan overgevoeligheid veroorzaken bij inademing.
- R 43** Kan forårsage overfølsomhed ved berøring med huden.
Sensibilisierung durch Hautkontakt möglich.
Δύναται να προκαλέσει ευαισθητοποίηση δια της επαφής με το δέρμα.
May cause sensitization by skin contact.
Peut entraîner une sensibilisation par contact avec la peau.
Può provocare sensibilizzazione per contatto con la pelle.
Kan overgevoeligheid veroorzaken bij contact met de huid.
- R 44** Explosionsfarlig ved opvarmning under indeslutning.
Explosionsgefahr bei Erhitzen unter Einschluss.
Κίνδυνος εκρήξεως εάν θερμανθεί σε κλειστή ατμόσφαιρα.
Risk of explosion if heated under confinement.
Risque d'explosion si chauffé en ambiance confinée.
Rischio di esplosione per riscaldamento in ambiente confinato.
Ontploffingsgevaar bij verwarming in afgesloten toestand.
- R 45** Kan fremkalde kræft.
Kann Krebs erzeugen.
Μπορεί να προκαλέσει καρκίνο.
May cause cancer.
Peut causer le cancer.
Può provocare il cancro.
Kan kanker veroorzaken.

- R 46** Kan forårsage arvelige genetiske skader.
Kann vererbare Schäden verursachen.
Μπορεί να προκαλέσει κληρονομικές γενετικές βλάβες.
May cause heritable genetic damage.
Peut causer des altérations génétiques héréditaires.
Può provocare alterazioni genetiche ereditarie.
Kan erfelijke genetische schade veroorzaken.
- R 47** Kan medføre fosterskader.
Kann Mißbildungen verursachen.
Μπορεί να προκαλέσει εκ γενετής παραμορφώσεις.
May cause birth defects.
Peut causer des malformations congénitales.
Può provocare malformazioni congenite.
Kan geboortefwijkingen veroorzaken.
- R 48** Alvorlig sundhedsfare ved længere tids påvirkning.
Gefahr ernster Gesundheitsschäden bei längerer Exposition.
Κίνδυνος σοβαρής βλάβης για την υγεία κατόπιν παρατεταμένης εκθέσεως.
Danger of serious damage to health by prolonged exposure.
Risque d'effets graves pour la santé en cas d'exposition prolongée.
Pericolo di gravi danni per la salute in caso di esposizione prolungata.
Gevaar voor ernstige schade aan de gezondheid bij langdurige blootstelling.

Kombination af R-sætninger
Kombination der R-Sätze
Συνδυασμός των R-φράσεων
Combination of R-Phrases
Combinaison des phrases R
Combinazioni delle frasi R
Kombinatie van de R-zinnen

- R 14/15** Reagerer voldsomt med vand under dannelse af yderst brandfarlige gasser.
Reagiert heftig mit Wasser unter Bildung leichtentzündlicher Gase.
Αντιδρά βιαίως κατά την επαφή με το ύδωρ εκλύοντας αέρια λίαν εύανάφλεκτα.
Reacts violently with water liberating highly flammable gases.
Réagit violemment au contact de l'eau en dégageant des gaz très inflammables.
Reagisce violentemente con l'acqua liberando gas facilmente infiammabili.
Reageert heftig met water en vormt daarbij licht ontvlambaar gas.
- R 15/29** Reagerer med vand under dannelse af giftig og yderst brandfarlige gasser.
Reagiert mit Wasser unter Bildung giftiger und leichtentzündlicher Gase.
Σε επαφή με το νερό ελευθερώνονται τοξικά, λίαν εύφλεκτα αέρια.
Contact with water liberates toxic, highly flammable gas.
Au contact de l'eau dégage des gaz toxiques et très inflammables.
A contatto con acqua libera gas tossici e facilmente infiammabili.
Vormt vergiftig en licht ontvlambaar gas in contact met water.
- R 20/21** Farlig ved indånding og ved berøring med huden.
Gesundheitsschädlich beim Einatmen und bei Berührung mit der Haut.
Βλαβερό όταν εισπνέεται και σε επαφή με το δέρμα.
Harmful by inhalation and in contact with skin.
Nocif par inhalation et par contact avec la peau.
Nocivo per inalazione e contatto con la pelle.
Schadelijk bij inademing en bij aanraking met de huid.

- R 20/22** Farlig ved indånding og ved indtagelse.
Gesundheitsschädlich beim Einatmen und Verschlucken.
Βλαβερό όταν εισπνέεται και σε περίπτωση καταπόσεως.
Harmful by inhalation and if swallowed.
Nocif par inhalation et ingestion.
Nocivo per inalazione e ingestione.
Schadelijk bij inademing en opname door de mond.
- R 20/21/22** Farlig ved indånding, ved berøring med huden og ved indtagelse.
Gesundheitsschädlich beim Einatmen, Verschlucken und Berührung mit der Haut.
Βλαβερό όταν εισπνέεται, σε επαφή με το δέρμα και σε περίπτωση καταπόσεως.
Harmful by inhalation, in contact with skin and if swallowed.
Nocif par inhalation, contact avec la peau et par ingestion.
Nocivo per inalazione, ingestione e contatto con la pelle.
Schadelijk bij inademing, opname door de mond en aanraking met de huid.
- R 21/22** Farlig ved berøring med huden og ved indtagelse.
Gesundheitsschädlich bei Berührung mit der Haut und beim Verschlucken.
Βλαβερό σε επαφή με το δέρμα και σε περίπτωση καταπόσεως.
Harmful in contact with skin and if swallowed.
Nocif par contact avec la peau et par ingestion.
Novico a contatto con la pelle e per ingestione.
Schadelijk bij aanraking met de huid en bij opname door de mond.
- R 23/24** Giftig ved indånding og ved berøring med huden.
Giftig beim Einatmen und bei Berührung mit der Haut.
Τοξικό όταν εισπνέεται και σε επαφή με το δέρμα.
Toxic by inhalation and in contact with skin.
Toxique par inhalation et par contact avec la peau.
Tossico per inalazione e contatto con la pelle.
Vergiftig bij inademing en bij aanraking met de huid.
- R 23/25** Giftig ved indånding og ved indtagelse.
Giftig beim Einatmen und Verschlucken.
Τοξικό όταν εισπνέεται και σε περίπτωση καταπόσεως.
Toxic by inhalation and if swallowed.
Toxique par inhalation et ingestion.
Tossico per inalazione e ingestione.
Vergiftig bij inademing en opname door de mond.

- R 23/24/25** Giftig ved indånding, ved berøring med huden og ved indtagelse.
Giftig beim Einatmen, Verschlucken und Berührung mit der Haut.
Τοξικό όταν εισπνέεται, σε επαφή με το δέρμα και σε περίπτωση καταπόσεως.
Toxic by inhalation, in contact with skin and if swallowed.
Toxique par inhalation, contact avec la peau et par ingestion.
Tossico per inalazione, ingestione e contatto con la pelle.
Vergiftig bij inademing, opname door de mond en aanraking met de huid.
- R 24/25** Giftig ved berøring med huden og ved indtagelse.
Giftig bei Berührung mit der Haut und beim Verschlucken.
Τοξικό σε επαφή με το δέρμα και σε περίπτωση καταπόσεως.
Toxic in contact with skin and if swallowed.
Toxique par contact avec la peau et par ingestion.
Tossico a contatto con la pelle e per ingestione.
Vergiftig bij aanraking met de huid en bij opname door de mond.
- R 26/27** Meget giftig ved indånding og ved berøring med huden.
Sehr giftig beim Einatmen und bei Berührung mit der Haut.
Πολύ τοξικό όταν εισπνέεται και σε επαφή με το δέρμα.
Very toxic by inhalation and in contact with skin.
Très toxique par inhalation et par contact avec la peau.
Altamente tossico per inalazione e contatto con la pelle.
Zeer vergiftig bij inademing en bij aanraking met de huid.
- R 26/28** Meget giftig ved indånding og ved indtagelse.
Sehr giftig beim Einatmen und Verschlucken.
Πολύ τοξικό όταν εισπνέεται και σε περίπτωση καταπόσεως.
Very toxic by inhalation and if swallowed.
Très toxique par inhalation et ingestion.
Altamente tossico per inalazione e per ingestione.
Zeer vergiftig bij inademing en opname door de mond.
- R 26/27/28** Meget giftig ved indånding, ved berøring med huden og ved indtagelse.
Sehr giftig beim Einatmen, Verschlucken und Berührung mit der Haut.
Πολύ τοξικό όταν εισπνέεται, σε επαφή με το δέρμα και σε περίπτωση καταπόσεως.
Very toxic by inhalation, in contact with skin and if swallowed.
Très toxique par inhalation, contact avec la peau et par ingestion.
Altamente tossico per inalazione, ingestione e contatto con la pelle.
Zeer vergiftig bij inademing, opname door de mond en aanraking met de huid.

- R 27/28** Meget giftig ved berøring med huden og ved indtagelse.
Sehr giftig bei Berührung mit der Haut und beim Verschlucken.
Πολύ τοξικό σε επαφή με το δέρμα και σε περίπτωση
καταπόσεως.
Very toxic in contact with skin and if swallowed.
Très toxique par contact avec la peau et par ingestion.
Altamente tossico a contatto con la pelle et per ingestione.
Zeer vergiftig bij aanraking met de huid en bij opname door
de mond.
- R 36/37** Irriterer øjnene og åndedrætsorganerne.
Reizt die Augen und die Atmungsorgane.
Ερεθίζει τα μάτια και το αναπνευστικό σύστημα.
Irritating to eyes and respiratory system .
Irritant pour les yeux et les voies respiratoires.
Irritante per le vie respiratorie e la pelle.
Irriterend voor de ogen en de ademhalingswegen.
- R 36/38** Irriterer øjnene og huden.
Reizt die Augen und die Haut.
Ερεθίζει τα μάτια και το δέρμα.
Irritating to eyes and skin.
Irritant pour les yeux et la peau.
Irritante per gli occhi e la pelle.
Irriterend voor de ogen en de huid.
- R 36/37/38** Irriterer øjnene, åndedrætsorganerne og huden.
Reizt die Augen, Atmungsorgane und die Haut.
Ερεθίζει τα μάτια, το αναπνευστικό σύστημα και το δέρμα.
Irritating to eyes, respiratory system and skin.
Irritant pour les yeux, les voies respiratoires et la peau.
Irritante per gli occhi, le vie respiratorie e la pelle.
Irriterend voor de ogen, de ademhalingswegen en de huid.
- R 37/38** Irriterer åndedrætsorganerne og huden.
Reizt die Atmungsorgane und die Haut.
Ερεθίζει το αναπνευστικό σύστημα και το δέρμα.
Irritating to respiratory system and skin.
Irritant pour les voies respiratoires et la peau.
Irritante per le vie respiratorie e la pelle.
Irriterend voor ademhalingswegen en de huid.

R 42/43 Kan forårsage overfølsomhed ved indånding og ved berøring med huden.
Sensibilisierung durch Einatmen und Hautkontakt möglich.
Δύναται να προκαλέσει ευαισθητοποίηση δια της εισπνοής και επαφής με το δέρμα.
May cause sensitization by inhalation and skin contact.
Peut entraîner une sensibilisation par inhalation et contact avec la peau.
Può provocare sensibilizzazione per inalazione e contatto con la pelle.
Kan overgevoeligheid veroorzaken bij inademing of contact met de huid.

BILAG IV

Forsigtighedsregler for farlige stoffer

ANLAGE IV

Sicherheitsratschläge für gefährliche Stoffe

ΠΑΡΑΡΤΗΜΑ IV

Μέτρα ασφαλείας σχετικά με επικίνδυνες χημικές ουσίες

ANNEX IV

Safety advice concerning dangerous chemical substances

ANNEXE IV

Conseils de prudence concernant les substances dangereuses

ALLEGATO IV

Consigli di prudenza riguardanti le sostanze pericolose

BIJLAGE IV

Veiligheidsaanbevelingen met betrekking tot gevaarlijke stoffen

- S 1** Opbevares under lås.
Unter Verschluss aufbewahren.
Φυλάσσεται κλειδωμένο.
Keep locked up.
Conserver sous clé.
Conservare sotto chiave.
Achter slot bewaren.
- S 2** Opbevares utilgængeligt for børn.
Darf nicht in die Hände von Kindern gelangen.
Μακριά από παιδιά.
Keep out of reach of children.
Conserver hors de la portée des enfants.
Conservare fuori della portata dei bambini.
Buiten bereik van kinderen bewaren.
- S 3** Opbevares køligt.
Kühl aufbewahren.
Σε δροσερό μέρος.
Keep in a cool place.
Conserver dans un endroit frais.
Conservare in luogo fresco.
Op een koele plaats bewaren.
- S 4** Må ikke opbevares i nærheden af beboelse.
Von Wohnplätzen fernhalten.
Μακριά από κατοικημένους χώρους.
Keep away from living quarters.
Conserver à l'écart de tout local d'habitation.
Conservare lontano da locali di abitazione.
Verwijderd van woonruimten opbergen.
- S 5** Opbevares under ... (en egnet væske som angives af fabrikanten).
Unter ... aufbewahren (geeignete Flüssigkeit vom Hersteller anzugeben).
Διατηρείται το περιεχόμενο μέσα σε (το είδος του κατάλληλου υγρού καθορίζεται από τον κατασκευαστή).
Keep contents under ... (appropriate liquid to be specified by the manufacturer).
Conserver sous ... (liquide approprié à spécifier par le fabricant).
Conservare sotto... (liquido appropriato da indicarsi da parte del fabbricante).
Onder... houden (geschikte vloeistof door fabrikant op te geven).

- S 6** Opbevares under... (en inaktiv gas, som angives af fabrikanten).
Unter... aufbewahren (inertes Gas vom Hersteller anzugeben).
Διατηρείται σε ατμόσφαιρα (το είδος του αδρανούς αερίου καθορίζεται από τον κατασκευαστή).
Keep under... (inert gas to be specified by the manufacturer).
Conserver sous... (gaz inerte à spécifier par le fabricant).
Conservare sotto... (gas inerte da indicarsi da parte del fabbricante).
Onder... houden (inert gas door fabrikant op te geven).
- S 7** Emballagen skal holdes tæt lukket.
Behälter dicht geschlossen halten.
Το δοχείο διατηρείται ερμητικά κλεισμένο.
Keep container tightly closed.
Conserver le récipient bien fermé.
Conservare il recipiente ben chiuso.
In goed gesloten verpakking bewaren.
- S 8** Emballagen skal opbevares tørt.
Behälter trocken halten.
Το δοχείο να προστατεύεται από υγρασία.
Keep container dry.
Conserver le récipient à l'abri de l'humidité.
Conservare al riparo dall'umidità.
Verpakking droog houden.
- S 9** Emballagen skal opbevares på et godt ventileret sted.
Behälter an einem gut gelüfteten Ort aufbewahren.
Το δοχείο να διατηρείται σε καλά αεριζόμενο μέρος.
Keep container in a well-ventilated place.
Conserver le récipient dans un endroit bien ventilé.
Conservare il recipiente in luogo ben ventilato.
Op een goed geventileerde plaats bewaren.
- S 12** Emballagen må ikke lukkes tæt.
Behälter nicht gasdicht verschließen.
Μη διατηρείται το δοχείο ερμητικά κλεισμένο.
Do not keep the container sealed.
Ne pas fermer hermétiquement le récipient.
Non chiudere ermeticamente il recipiente.
De verpakking niet hermetisch sluiten.
- S 13** Må ikke opbevares sammen med nærings- og nydelsesmidler samt foderstoffer.
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
Μακριά από τρόφιμα, ποτά και ζωοτροφές.
Keep away from food, drink and animal feeding stuffs.
Conserver à l'écart des aliments et boissons y compris ceux pour animaux.
Conservare lontano da alimenti o mangimi e da bevande.
Verwijderd houden van eet- en drinkwaren en van diervoeder.

- S 14** Opbevares adskilt fra ... (uforligelige stoffer, som angives af fabrikanten).
Von ... fernhalten (Inkompatible Substanzen sind vom Hersteller anzugeben).
Μακριά από (ασύμβατες ουσίες καθορίζονται από τον κατασκευαστή).
Keep away from ... (incompatible materials to be indicated by the manufacturer).
Conserver à l'écart des ... (matières incompatibles à indiquer par le fabricant).
Conservare lontano da ... (sostanze incompatibili da precisare da parte del produttore).
Verwijderd houden van ... (in te vullen door de fabrikant).
- S 15** Må ikke udsættes for varme.
Vor Hitze schützen.
Μακριά από θερμότητα.
Keep away from heat.
Conserver à l'écart de la chaleur.
Conservare lontano dal calore.
Verwijderd houden van warmte.
- S 16** Holdes væk fra antændelseskilder - Rygning forbudt.
Von Zündquellen fernhalten - Nicht rauchen.
Μακριά από πηγές αναφλέξεως - Απαγορεύεται το κάπνισμα.
Keep away from sources of ignition - No smoking.
Conserver à l'écart de toute source d'ignition - Ne pas fumer.
Conservare lontano da fiamme e scintille - Non fumare.
Verwijderd houden van ontstekingsbronnen - Niet roken.
- S 17** Holdes væk fra brændbare stoffer.
Von brennbaren Stoffen fernhalten.
Μακριά από καύσιμες ουσίες.
Keep away from combustible material.
Tenir à l'écart des matières combustibles.
Tenere lontano da sostanze combustibili.
Verwijderd houden van ontbrandbare stoffen.
- S 18** Emballagen skal behandles og åbnes med forsigtighed.
Behälter mit Vorsicht öffnen und handhaben.
Χειριστείτε και ανοίξτε το δοχείο προσεκτικά.
Handle and open container with care.
Manipuler et ouvrir le récipient avec prudence.
Manipolare ed aprire il recipiente con cautela.
Verpakking voorzichtig behandelen en openen.

- S 20 Der må ikke spises eller drikkes under brugen.
Bei der Arbeit nicht essen und trinken.
Μη τρώτε ή πίνετε όταν το χρησιμοποιείτε.
When using do not eat or drink.
Ne pas manger et ne pas boire pendant l'utilisation.
Non mangiare né bere durante l'impiego.
Niet eten of drinken tijdens gebruik.
- S 21 Der må ikke ryges under brugen.
Bei der Arbeit nicht rauchen.
Μη καπνίζετε όταν το χρησιμοποιείτε.
When using do not smoke.
Ne pas fumer pendant l'utilisation.
Non fumare durante l'impiego.
Niet roken tijdens gebruik.
- S 22 Undgå indånding af støv.
Staub nicht einatmen.
Μη αναπνέετε την σκόνη.
Do not breathe dust.
Ne pas respirer les poussières.
Non respirare le polveri.
Stof niet inademen.
- S 23 Undgå indånding af gas/røg/dampe/aerosol-tågen (den eller de pågældende betegnelser angives af fabrikanten).
Gas/Rauch/Dampf/Aerosol nicht einatmen (geeignete Bezeichnung(en) vom Hersteller anzugeben).
Μη αναπνέετε αέρια/καπνούς/εκνεφώματα (όρος(οι) κατάλληλος(οι) να υποδειχθούν από τον κατασκευαστή).
Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
Ne pas respirer les gaz/vapeurs/fumées/aérosols (terme(s) approprié(s) à indiquer par le fabricant).
Non respirare i gas/fumi/vapori/aerosoli (termine(i) appropriato(i) da precisare da parte del produttore).
Gas/rook/damp/spuitnevel niet inademen (geschikte term(en) door de fabrikant aan te geven).
- S 24 Undgå kontakt med huden.
Berührung mit der Haut vermeiden.
Αποφεύγετε επαφή με το δέρμα.
Avoid contact with skin.
Eviter le contact avec la peau.
Evitare il contatto con la pelle.
Aanraking met de huid vermijden.

- S 25 Undgå kontakt med øjnene.
Berührung mit den Augen vermeiden.
Αποφεύγετε επαφή με τα μάτια.
Avoid contact with eyes.
Eviter le contact avec les yeux.
Evitare il contatto con gli occhi.
Aanraking met de ogen vermijden.
- S 26 I tilfælde af stof i øjnene skyl straks grundigt med vand, og
søg læge.

Bei Berührung mit den Augen gründlich mit Wasser abspülen und
Arzt konsultieren.

Σε περίπτωση επαφής με τα μάτια πλύνετε αμέσως με άφθονο νερό
και ζητήστε ιατρική συμβουλή.

In case of contact with eyes, rinse immediately with plenty of
water and seek medical advice.

En cas de contact avec les yeux, laver immédiatement et
abondamment avec de l'eau et consulter un spécialiste.

In caso di contatto con gli occhi, lavare immediatamente e
abbondantemente con acqua e consultare un medico.

Bij aanraking met de ogen onmiddellijk met overvloedig water
afspoelen en deskundig medisch advies inwinnen.
- S 27 Tilsmudset tøj tages straks af.
Besmutzte, getränkte Kleidung sofort ausziehen.
Αφαιρέστε αμέσως όλα τα ενδύματα που έχουν μολυνθεί.
Take off immediately all contaminated clothing.
Enlever immédiatement tout vêtement souillé ou éclaboussé.
Togliersi di dosso immediatamente gli indumenti contaminati.
Verontreinigde kleding onmiddellijk uittrekken.
- S 28 Straks efter brugen/kontakt med stoffet afvask med rigelig ...
(angives af fabrikanten).

Bei Berührung mit der Haut sofort abwaschen mit viel ... (vom
Hersteller anzugeben).

Σε περίπτωση επαφής με το δέρμα, πλύνετε αμέσως με άφθονο ...
(το είδος του υγρού καθορίζεται από τον κατασκευαστή).

After contact with skin, wash immediately with plenty of ...
(to be specified by the manufacturer).

Après contact avec la peau, se laver immédiatement et
abondamment avec ... (produits appropriés à indiquer par le
fabricant).

In caso di contatto con la pelle lavarsi immediatamente ed
abbondantemente con ... (prodotti idonei da indicarsi da parte
del fabbricante).

Na aanraking met de huid onmiddellijk wassen met veel ... (aan
te geven door de fabrikant).

- S 29 Må ikke kommes i kloakafløb.
Nicht in die Kanalisation gelangen lassen.
Μη ρίχνετε τα υπολείμματα στην αποχέτευση.
Do not empty into drains.
Ne pas jeter les résidus à l'égout.
Non gettare i residui nelle fognature.
Afval niet in de gootsteen werpen.
- S 30 Hæld aldrig vand på denne vare.
Niemals Wasser hinzugießen.
Ποτέ μη προσθέτετε νερό στο προϊόν αυτό.
Never add water to this product.
Ne jamais verser de l'eau dans ce produit.
Non versare acqua sul prodotto.
Nooit water op deze stof gieten.
- S 33 Træf foranstaltninger mod statisk elektricitet.
Maßnahmen gegen elektrostatische Aufladungen treffen.
Λάβετε προστατευτικά μέτρα έναντι ηλεκτροστατικών εκκενώσεων.
Take precautionary measures against static discharges.
Eviter l'accumulation de charges électrostatiques.
Evitare l'accumulo di cariche elettrostatiche.
Maatregelen treffen tegen ontladingen van statische elektriciteit.
- S 34 Undgå stød og gnidning.
Schlag und Reibung vermeiden.
Αποφεύγετε τραντάγματα και τριβή.
Avoid shock and friction.
Eviter le choc et le frottement.
Evitare l'urto e lo sfregamento.
Schok en wrijving vermijden.
- S 35 Stoffet og emballagen skal bortskaffes på en sikker måde.
Abfälle und Behälter müssen in gesicherter Weise beseitigt werden.
Πάρτε τις απαραίτητες προφυλάξεις προκειμένου να απορρίψετε (πετάξετε) το προϊόν.
This material and its container must be disposed of in a safe way.
Ne se débarasser de ce produit et de son récipient qu'en prenant toute précaution d'usage.
Non disfarsi del prodotto e del recipiente se non con le dovute precauzioni.
Deze stof en de verpakking op veilige wijze afvoeren.
- S 36 Under arbejdet bæres egnet beskyttelsesdragt.
Bei der Arbeit geeignete Schutzkleidung tragen.
Φοράτε κατάλληλη προστατευτική ενδυμασία.
Wear suitable protective clothing.
Porter un vêtement de protection approprié.
Usare indumenti protettivi adatti.
Draag geschikte beschermende kleding.

- S 37** Under arbejdet bæres dertil egnede beskyttelseshandsker.
Geeignete Schutzhandschuhe tragen.
Φοράτε κατάλληλα γάντια.
Wear suitable gloves.
Porter des gants appropriés.
Usare guanti adatti.
Draag geschikte handschoenen.
- S 38** Hvis effektiv ventilation ikke er mulig, brug egnet åndedrætsværn.
Bei unzureichender Belüftung Atemschutzgerät anlegen.
Σε περίπτωση μη επαρκούς αερισμού, χρησιμοποιείται κατάλληλη αναπνευστική συσκευή.
In case of insufficient ventilation, wear suitable respiratory equipment.
En cas de ventilation insuffisante porter un appareil respiratoire approprié.
In caso di ventilazione insufficiente, usare un apparecchio respiratorio adatto.
Bij ontoereikende ventilatie een geschikt ademhalingsbeschuttingsmiddel dragen.
- S 39** Under arbejdet bæres beskyttelsesbriller/ansigtsskærm.
Schutzbrille/Gesichtsschutz tragen.
Χρησιμοποιείτε συσκευή προστασίας ματιών/προσώπου.
Wear eye/face protection.
Porter un appareil de protection des yeux/du visage.
Proteggersi gli occhi/la faccia.
Een beschermingsmiddel voor de ogen/voor het gezicht dragen.
- S 40** Gulvet og tilsmudsede genstande renses med ... (midlerne angives af fabrikanten).
Fußboden und verunreinigte Gegenstände mit ... reinigen (Material vom Hersteller anzugeben).
Για το καθαρισμό του πατώματος και όλων των αντικειμένων που έχουν μολυνθεί από το αυτό υλικό χρησιμοποιείτε ... (το είδος καθορίζεται από τον κατασκευαστή).
To clean the floor and all objects contaminated by this material, use ... (to be specified by the manufacturer).
Pour nettoyer le sol ou les objets souillés par ce produit, utiliser ... (à préciser par le fabricant).
Per pulire il pavimento e gli oggetti contaminati da questo prodotto, usare ... (da precisare da parte del produttore).
Voor de reiniging van de vloer en alle voorwerpen verontreinigd met dit materiaal, ... gebruiken (aan te geven door de fabrikant).

- S 41** Ved brand eller eksplosioner undgå at indånde røgen.
Explosions- und Brandgase nicht einatmen.
Σε περίπτωση πυρκαϊάς και/ή εκρήξεως μην αναπνέετε τους καπνούς.
In case of fire and/or explosion do not breathe fumes.
En cas d'incendie et/ou d'explosion ne pas respirer les fumées.
In caso di incendio e/o esplosione non respirare i fumi.
In geval van brand en/of explosie inademen van rook vermijden.
- S 42** Brug egnet åndedrætsværn ved rygning/sprøjtning (den eller de pågældende betegnelser angives af fabrikanten).
Bei Räuchern/Versprühen geeignetes Atemschutzgerät anlegen (geeignete Bezeichnung(en) vom Hersteller anzugeben).
Σε περίπτωση παραγωγής καπνού ή εκνεφώματος χρησιμοποιείτε κατάλληλη αναπνευστική συσκευή (όρος(οι) κατάλληλος(οι) να υποδειχθούν από τον κατασκευαστή).
During fumigation/spraying wear suitable respiratory equipment (appropriate wording to be specified by the manufacturer).
Pendant les fumigations/pulvérisations porter un appareil respiratoire approprié (terme(s) approprié(s) à indiquer par le fabricant).
Durante le fumigazioni usare un apparecchio respiratorio adatto (termine(i) appropriato(i) da precisare da parte del produttore).
Tijdens de ontsmetting/bespuiting een geschikt ademhalings-toestel dragen (geschikte term(en) door de fabrikant aan te geven).
- S 43** Ved brandslukning brug ... (angives af fabrikanten. Såfremt vand ikke må bruges, tilføj "Brug ikke vand").
Zum Löschen ... (vom Hersteller anzugeben) verwenden (wenn Wasser die Gefahr erhöht, anfügen : "Kein Wasser verwenden").
Σε περίπτωση πυρκαϊάς χρησιμοποιείτε ... (Αναφέρατε το ακριβές είδος μέσων κατασβέσεως. Εάν το νερό αυξάνει τον κίνδυνο προσθέστε: Μην χρησιμοποιείτε ποτέ νερό).
In case of fire, use ... (indicate in the space the precise type of fire-fighting equipment. If water increases the risk, add - Never use water).
En cas d'incendie utiliser ... (moyens d'extinction à préciser par le fabricant. Si l'eau augmente les risques ajouter "Ne jamais utiliser d'eau").
In casi di incendio usare ... (mezzi estinguenti idonei da indicarsi da parte del fabbricante. Se l'acqua aumenta il rischio precisare "Non usare acqua").
In geval van brand ... gebruiken (blusmiddelen aan te duiden door de fabrikant. Indien water het risico vergroot toevoegen : "Nooit water gebruiken").

S 44 Ved ildebefindende kontakt læge; vis etiketten hvis muligt.

Bei Unwohlsein ärztlichen Rat einholen (wenn möglich dieses Etikett vorzeigen).

Εάν αισθανθείτε αδιαθεσία, ζητήστε ιατρική συμβουλή (δείξτε την ετικέτα όπου είναι δυνατό).

If you feel unwell, seek medical advice (show the label where possible).

En cas de malaise consulter un médecin (si possible lui montrer l'étiquette).

In caso di malessere consultare il medico (se possibile, mostrargli l'etichetta).

Indien men zich onwel voelt een arts raadplegen (indien mogelijk hem dit etiket tonen).

S 45 Ved ulykkestilfælde eller ved ildebefindende er omgående lægebehandling nødvendig; vis etiketten hvis muligt.

Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich dieses Etikett vorzeigen).

Σε περίπτωση ατυχήματος ή αν αισθανθείτε αδιαθεσία ζητήστε αμέσως ιατρική συμβουλή (δείξτε την ετικέτα όπου αυτό είναι δυνατό).

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

En cas d'accident ou de malaise consulter immédiatement un médecin (si possible lui montrer l'étiquette).

In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta).

In geval van ongeval of indien men zich onwel voelt onmiddellijk een arts raadplegen (indien mogelijk hem dit etiket tonen).

S 46

Ved indtagelse, kontakt omgående læge og vis denne beholder eller etiket.

Bei Verschlucken sofort ärztlichen Rat einholen und Verpackung oder Etikett vorzeigen.

Σε περίπτωση καταπόσεως, να ζητηθεί αμέσως ιατρική συμβουλή και να επιδειχθεί το δοχείο ή η ετικέττα.

If swallowed, seek medical advice immediately and show this container or label.

En cas d'ingestion consulter immédiatement un médecin et lui montrer l'emballage ou l'étiquette.

In caso d'ingestione consultare immediatamente il medico e mostrargli il contenitore o l'etichetta.

In geval van inslikken onmiddellijk een arts raadplegen en verpakking of etiket tonen.

S 47

Må ikke opbevares ved temperaturer på over ... °C (angives af fabrikanten).

Nicht bei Temperaturen über ... °C aufbewahren (vom Hersteller anzugeben).

Διατηρείται σε θερμοκρασία ίση ή κατώτερη των ...°C (προς προσδιορισμό από τον κατασκευαστή).

Keep at temperature not exceeding ... °C (to be specified by the manufacturer).

Conserver à une température ne dépassant pas ...°C (à préciser par le fabricant).

Conservare a temperatura non superiore a ... °C (da precisare da parte del fabbricante).

Bewaren bij een temperatuur beneden ... °C (aan te geven door de fabrikant).

- S 48** Holdes befugtet med ... (passende middel angives af fabrikanten).
Feucht halten mit ... (geeignetes Mittel vom Hersteller anzugeben).
Διατηρείται υγρό με ... (κατάλληλο υγρό που πρέπει να καθοριστεί από τον κατασκευαστή)
Keep wetted with ... (appropriate material to be specified by the manufacturer).
Maintenir humide avec ... (moyen approprié à préciser par le fabricant).
Mantenere umido con ... (mezzo appropriato da precisare da parte del fabbricante).
Inhoud vochtig houden met ... (middel aan te geven door de fabrikant).
- S 49** Må kun opbevares i den originale emballage.
Nur im Originalbehälter aufbewahren.
Διατηρείται μόνο μέσα στο αρχικό δοχείο.
Keep only in the original container.
Conserver uniquement dans le récipient d'origine.
Conservare soltanto nel recipiente originale.
Uitsluitend in de oorspronkelijke verpakking bewaren.
- S 50** Må ikke blandes med ... (angives af fabrikanten).
Nicht mischen mit ... (vom Hersteller anzugeben).
Να μην αναμιχθεί με ... (καθορίζεται από τον κατασκευαστή).
Do not mix with ... (to be specified by the manufacturer).
Ne pas mélanger avec ... (à spécifier par le fabricant).
Non mescolare con ... (da specificare da parte del fabbricante).
Niet vermengen met ... (aan te geven door de fabrikant).
- S 51** Må kun bruges på steder med god ventilation.
Nur in gut gelüfteten Bereichen verwenden.
Χρησιμοποιείται μόνο σε χώρους με πολύ καλό αερισμό.
Use only in well ventilated areas.
Utiliser seulement dans des zones bien ventilées.
Usare soltanto in luogo ben ventilato.
Uitsluitend op goed geventileerde plaatsen gebruiken.

S 52

Bør ikke anvendes til større flader i beboelses- eller opholdsrum.

Nicht großflächig für Wohn- und Aufenthaltsräume zu verwenden.

Να μη χρησιμοποιηθεί σε ευρείες επιφάνειες σε κατοικούμενους χώρους

Not recommended for interior use on large surface areas.

Ne pas utiliser sur de grandes surfaces dans les locaux habités.

Non utilizzare su grandi superfici in locali abitati.

Niet voor gebruik op grote oppervlakken in woon- en verblijfruimtes.

**Kombination af S-sætninger
Kombination der S-sätze
Συνδυασμός των S-φράσεων
Combination of S-phrases
Combinaison des phrases S
Combinazioni delle frasi S
Kombinatie van de S-zinnen**

- S 1/2** Opbevares under lås og utilgængeligt for børn.
Unter Verschluss und für Kinder unzugänglich aufbewahren.
Φυλάξτε το κλειδωμένο και μακριά από παιδιά.
Keep locked up and out of reach of children.
Conserver sous clé et hors de portée des enfants.
Conservare sotto chiave e fuori della portata dei bambini.
Achter slot en buiten bereik van kinderen bewaren.
- S 3/7/9** Emballagen opbevares tæt lukket på et køligt, godt ventileret sted.
Behälter dicht geschlossen halten und an einem kühlen, gut gelüfteten Ort aufbewahren.
Διατηρήσατε το δοχείο καλώς κλεισμένο σε χώρο δροσερό και καλώς αεριζόμενο.
Keep container tightly closed in a cool, well-ventilated place.
Conserver le récipient bien fermé dans un endroit frais bien ventilé.
Tenere il recipiente ben chiuso in luogo fresco ben ventilato.
Gesloten verpakking op een koele en goed geventileerde plaats bewaren.
- S 3/9** Opbevares køligt og på et godt ventileret sted.
Behälter an einem kühlen, gut gelüfteten Ort aufbewahren.
Διατηρείται σε δροσερό και καλά αεριζόμενο μέρος.
Keep in a cool, well-ventilated place.
Conserver dans un endroit frais et bien ventilé.
Tenere il recipiente in luogo fresco e ben ventilato.
Op een koele en goed geventileerde plaats bewaren.

S 3/9/14

Opbevares køligt, godt ventileret og adskilt fra ...
(uforligelige stoffer angives af fabrikanten).

An einem kühlen, gut gelüfteten Ort, entfernt von ...
aufbewahren (die Stoffe, mit denen Kontakt vermieden werden
muß, sind vom Hersteller anzugeben).

Διατηρείται σε δροσερό και καλά αεριζόμενο μέρος μακριά από ...
(ασύμβατα υλικά που υποδεικνύονται από τον κατασκευαστή).

Keep in a cool, well ventilated place away from ...
(incompatible materials to be indicated by the manufacturer).

Conserver dans un endroit frais et bien ventilé à l'écart
des ... (matières incompatibles à indiquer par le fabricant).

Conservare in luogo fresco e ben ventilato lontano da ...
(materiali incompatibili da precisare da parte del
fabbricante).

Bewaren op een koele, goed geventileerde plaats verwijderd
van ... (stoffen, waarmee contact vermeden dient te worden,
aan te geven door de fabrikant).

S 3/9/14/49

Må kun opbevares i originalemballagen på et køligt, godt
ventileret sted og adskilt fra ... (uforligelige stoffer
angives af fabrikanten).

Nur im Originalbehälter an einem kühlen, gut gelüfteten Ort,
entfernt von ... aufbewahren (die Stoffe, mit denen Kontakt
vermieden werden muß, sind vom Hersteller anzugeben).

Διατηρείται μόνο μέσα στο αρχικό δοχείο σε δροσερό και καλά
αεριζόμενο μέρος από ... (ασύμβατα υλικά που υποδεικνύονται από
τον κατασκευαστή).

Keep only in the original container in a cool, well ventilated
place away from ... (incompatible materials to be indicated by
the manufacturer).

Conserver uniquement dans le récipient d'origine dans un
endroit frais et bien ventilé à l'écart de ... (matières
incompatibles à indiquer par le fabricant).

Conservare soltanto nel contenitore originale in luogo fresco e
ben ventilato lontano da ... (materiali incompatibili da
precisare da parte del fabbricante).

Uitsluitend in de oorspronkelijke verpakking bewaren op een
koele, goed geventileerde plaats verwijderd van ... (stoffen,
waarmee contact vermeden dient te worden, aan te geven door de
fabrikant).

- S 3/9/49** Må kun opbevares i originalemballagen på et køligt, godt ventileret sted.
Nur im Originalbehälter an einem kühlen, gut gelüfteten Ort aufbewahren.
Διατηρείται μόνο μέσα στο αρχικό δοχείο σε δροσερό και καλά αεριζόμενο μέρος.
Keep only in the original container in a cool well ventilated place.
Conserver uniquement dans le récipient d'origine dans un endroit frais et bien ventilé.
Conservare soltanto nel contenitore originale in luogo fresco e ben ventilato.
Uitsluitend in de oorspronkelijke verpakking bewaren op een koele, goed geventileerde plaats.
- S 3/14** Opbevares køligt og adskilt fra ... (uforligelige stoffer angives af fabrikanten).
An einem kühlen, von ... entfernten Ort aufbewahren (die Stoffe, mit denen Kontakt vermieden werden muß, sind vom Hersteller anzugeben).
Διατηρείται σε δροσερό μέρος μακριά από ... (ασύμβατα υλικά που υποδεικνύονται από τον κατασκευαστή).
Keep in a cool place away from ... (incompatible materials to be indicated by the manufacturer).
Conserver dans un endroit frais à l'écart des ... (matières incompatibles à indiquer par le fabricant).
Conservare in luogo fresco lontano da ... (materiali incompatibili da precisare da parte del fabbricante).
Bewaren op een koele plaats verwijderd van ... (stoffen, waarmee contact vermeden dient te worden, aan te geven door de fabrikant).
- S 7/8** Emballagen skal holdes tæt lukket og opbevares tørt.
Behälter trocken und dicht geschlossen halten.
Το δοχείο διατηρείται ερμητικά κλεισμένο και προστατεύεται από την υγρασία.
Keep container tightly closed and dry.
Conserver le récipient bien fermé et à l'abri de l'humidité.
Conservare il recipiente ben chiuso e al riparo dall'umidità.
Droog houden en in een goed gesloten verpakking bewaren.

- S 7/9** Emballagen skal holdes tæt lukket og opbevares på et godt ventileret sted.
Behälter dicht geschlossen an einem gut gelüfteten Ort aufbewahren.
Το δοχείο διατηρείται ερμητικά κλεισμένο και σε καλά αεριζόμενο μέρος.
Keep container tightly closed and in a well-ventilated place.
Conserver le récipient bien fermé dans un endroit bien ventilé.
Tenere il recipiente ben chiuso e in luogo ben ventilato.
Gesloten verpakking op een goed geventileerde plaats bewaren.
- S 20/21** Der må ikke spises, drikkes eller ryges under brugen.
Bei der Arbeit nicht essen, trinken, rauchen.
Όταν το χρησιμοποιείτε μη τρώτε, πίνετε ή καπνίζετε.
When using do not eat, drink or smoke.
Ne pas manger, ne pas boire et ne pas fumer pendant l'utilisation.
Non mangiare, né bere, né fumare durante l'impiego.
Niet eten, drinken of roken tijdens gebruik.
- S 24/25** Undgå kontakt med huden og øjnene.
Berührung mit den Augen und der Haut vermeiden.
Αποφεύγετε επαφή με το δέρμα και με τα μάτια.
Avoid contact with skin and eyes.
Eviter le contact avec la peau et les yeux.
Evitare il contatto con gli occhi e con la pelle.
Aanraking met de ogen en de huid vermijden.
- S 36/37** Under arbejdet bæres dertil egnede beskyttelsesdragt og -handsker.
Bei der Arbeit geeignete Schutzhandschuhe und Schutzkleidung tragen.
Φοράτε κατάλληλη προστατευτική ενδυμασία και γάντια.
Wear suitable protective clothing and gloves.
Porter un vêtement de protection et des gants appropriés.
Usare indumenti protettivi e guanti adatti.
Draag geschikte handschoenen en beschermende kleding.
- S 36/37/39** Under arbejdet bæres dertil egnede beskyttelsesdragt, -handsker og -briller/ansigtsskærm
Bei der Arbeit geeignete Schutzkleidung, Schutzhandschuhe und Schutzbrille/Gesichtsschutz tragen.
Φοράτε κατάλληλη προστατευτική ενδυμασία, γάντια και συσκευή προστασίας ματιών/προσώπου.
Wear suitable protective clothing, gloves and eye/face protection.
Porter un vêtement de protection approprié, des gants et un appareil de protection des yeux/du visage.
Usare indumenti protettivi e guanti adatti e proteggersi gli occhi/la faccia.
Draag geschikte beschermende kleding, handschoenen en een beschermingsmiddel voor de ogen/voor het gezicht.

S 36/39

Under arbejdet bæres dertil egnede beskyttelsesdragt og
- briller/ansigtsskærm.

Bei der Arbeit geeignete Schutzkleidung und Schutzbrille/
Gesichtsschutz tragen.

Φοράτε κατάλληλη προστατευτική ενδυμασία και συσκευή προστασίας
ματιών/προσώπου.

Wear suitable protective clothing and eye/face protection.

Porter un vêtement de protection approprié et un appareil de
protection des yeux/du visage.

Usare indumenti protettivi adatti e proteggersi gli occhi/la
faccia.

Draag geschikte beschermende kleding en een beschermingsmiddel
voor de ogen/voor het gezicht.

S 37/39

Under arbejdet bæres dertil egnede beskytteshandsker og
- briller/ansigtsskærm.

Bei der Arbeit geeignete Schutzhandschuhe und Schutzbrille/
Gesichtsschutz tragen.

Φοράτε κατάλληλα γάντια και συσκευή προστασίας ματιών/προσώπου.

Wear suitable gloves and eye/face protection.

Porter des gants appropriés et un appareil de protection des
yeux/du visage.

Usare guanti adatti e proteggersi gli occhi/la faccia.

Draag geschikte handschoenen en een beschermingsmiddel voor de
ogen/voor het gezicht.

S 47/49

Må kun opbevares i originalemballagen ved en temperatur på ikke
over ... °C (angives af fabrikanten).

Nur im Originalbehälter bei einer Temperatur von nicht über ...
°C (vom Hersteller anzugeben) aufbewahren.

Διατηρείται μόνο μέσα στο αρχικό δοχείο σε θερμοκρασία ίση ή
κατώτερη των ...°C (προς προσδιορισμό απο τον κατασκευαστή).

Keep only in the original container at temperature not
exceeding ... °C (to be specified by the manufacturer).

Conserver uniquement dans le récipient d'origine à température
ne dépassant pas ... °C (à préciser par le fabricant).

Conservare soltanto nel contenitore originale a temperatura non
superiore a ... °C (da precisare da parte del fabbricante).

Uitsluitend in de oorspronkelijke verpakking bewaren bij een
temperatuur beneden ... °C (aan te geven door de fabrikant).

ANNEX VI

GENERAL CLASSIFICATION AND LABELLING REQUIREMENTS FOR DANGEROUS SUBSTANCES

Part I

A. Save where otherwise provided in the separate Directives on dangerous preparations, the substances and preparations shall be classified as very toxic, toxic or harmful according to the following criteria:

- (a) classification as very toxic, toxic or harmful shall be effected by determining the acute toxicity of the commercial substance or preparation in animals, expressed in LD₅₀ or LC₅₀ values with the following parameters being taken as reference values:

Category	LD ₅₀ absorbed orally in rat mg/kg	LD ₅₀ percutaneous absorption in rat or rabbit mg/kg	LC ₅₀ absorbed by inhalation in rat mg/litre/four hours
Very toxic	≤ 25	≤ 50	≤ 0.5
Toxic	25 to 200	50 to 400	0.5 to 2
Harmful	200 to 2 000	400 to 2 000	2 to 20

- (b) if facts show that for the purposes of classification it is inadvisable to use the LD₅₀ or LC₅₀ values as a principal basis because the substances or preparations produce other effects, the substances or preparations shall be classified according to the magnitude of these effects.

Part II

B. Save where otherwise provided in separate Directives on dangerous preparations, substances and preparations shall be classified as corrosive or as irritant according to the following criteria:

(a) Corrosion criteria

A substance or a preparation is considered to be corrosive if, when it is applied to healthy intact animal skin, it produces full thickness destruction of skin tissue on at least one animal during the test for skin irritation cited in Annex V or during an equivalent method or if the result can be predicted, for example from strongly acid or alkaline reactions.

(b) Irritation criteria

A substance or a preparation is considered to be irritant if it causes inflammation of the skin or ocular lesions corresponding to the evaluation of the parameters given below:

1. Inflammation of the skin

- (i) Inflammation of the skin which persists for at least 24 hours after an exposure period of up to four hours and corresponds to the following values determined on the rabbit according to the cutaneous irritation test method cited in Annex V:

- the mean value of the scores for either erythema and eschar formation or oedema formation, calculated over all the animals tested, is two or more,
- or, in the case where the Annex V test has been completed using three animals, either erythema and eschar formation or oedema formation equivalent to a mean value of two or more calculated for each animal separately has been observed in two or more animals.

In both cases all scores at each of the reading times (24, 48 and 72 hours) for an effect should be used in calculating the respective mean values.

- (ii) If practical experience shows the substances and preparations to be capable of inducing a sensitization reaction in a substantial number of persons by skin contact, or on the basis of a positive response in experimental animals.

In the case of the test method for skin sensitization detailed in Annex V or in the case of other adjuvant-type test methods a response in at least 30 % of the animals is considered positive. For any other test method a response in at least 15 % of the animals is considered positive.

2. Ocular lesion

Ocular lesions which occur within 72 hours after exposure and which persist for at least 24 hours and correspond to the following values determined on the rabbit according to the eye irritation test method cited in Annex V:

- the mean value of the scores for each type of lesion, calculated over all the animals tested, is one of the following:
 - cornea opacity two or more
 - iris lesion one or more
 - redness of conjunctivae 2,5 or more
 - oedema of conjunctivae (chemosis) two or more
- or, in the case where the Annex V test has been completed using three animals, either cornea opacity, iris lesion, redness of conjunctive or oedema of conjunctive (chemosis) equivalent to a mean value such as is quoted above, but calculated for each animal separately, has been observed in two or more animals.

In both cases all scores at each of the reading times (24, 48 and 72 hours) and for an effect should be used in calculating the respective means values.

- C. If the facts show the existence of effects other than the acute effects indicated by experiments with animals, e.g. carcinogenic, mutagenic, allergenic, sub-acute or chronic effects, the substances or preparations shall be classified according to the magnitude of these effects.

D. Guide to the classification and labelling of dangerous substances and preparations; criteria for the choice of phrases indicating special risks (R phrases) and safety advice (S phrases)

CONTENTS

- 1. General introduction**
- 2. Classification as dangerous and choice of risk phrases**
 - 2.1. Introduction
 - 2.2. Physico-chemical properties
 - 2.3. Toxicological properties
 - 2.4. Criteria for classification, choice of symbols, indication of danger and choice of risk phrases
 - 2.4.1. Explosive
 - 2.4.2. Oxidizing
 - 2.4.3. Extremely flammable
 - 2.4.4. Highly flammable
 - 2.4.5. Flammable
 - 2.4.6. Very toxic
 - 2.4.7. Toxic
 - 2.4.8. Harmful
 - 2.4.9. Corrosive
 - 2.4.10. Irritant
 - 2.4.11. Other properties
- 3. Additional criteria concerning specific effects of substances on health**
 - 3.1. Procedure for the classification of substances which may possibly have the effects mentioned in this chapter
 - 3.2. Carcinogenic substances
 - 3.3. Mutagenic substances
 - 3.4. Teratogenic substances
- 4. Choice of safety advice phrases**
- 5. Labelling proposal**

1. GENERAL INTRODUCTION

1.1. The information provided in this document is intended as a guide for all those concerned (manufacturers, importers, national authorities) with methods of classifying and labelling dangerous substances and preparations. It sets out the general principles governing the classification and labelling of substances and preparations referred to in Article 3 (3) of Directive 67/548/EEC, bearing in mind the exceptions mentioned in Article 3 (3) — 'save where contrary requirements for dangerous preparations are specified in separate Directives'.

1.2. The labelling requirements of this Directive and the separate Directives on dangerous preparations are intended to provide a primary means by which the general public and persons at work are given essential information about dangerous substances and preparations. The label draws the attention of persons handling or using substances and preparations to the inherent danger of certain such materials.

The label may also serve to draw attention to more comprehensive product information on safety and use available in other forms.

1.3. The label takes account of all potential hazards which are likely to be faced in the normal handling and use of dangerous substances and preparations when in the form in which they are placed on the market, but not necessarily in any different form in which they may finally be used, e.g. diluted. The most severe hazards are highlighted by symbols, such hazards and those arising from other dangerous properties are specified in standard risk phrases, and safety phrases give advice on necessary precautions.

The information is completed by the name of the substance under an internationally recognized chemical nomenclature, and the name and address of the manufacturer, or the distributor or the importer.

1.4. With respect to substances referred to in the second subparagraph of Article 5 (2) of Directive 67/548/EEC, the labelling applied by the manufacturer or his representative remains valid until the substance is listed in Annex I or until a decision not to list it has been taken in accordance with the procedure laid down in Article 21.

2. CLASSIFICATION AS DANGEROUS AND CHOICE OF RISK PHRASES

2.1. Introduction

The object of classification is to identify all the toxicological and physico-chemical properties of substances and preparations which may constitute a risk during normal handling or use.

— As regards substances for which the information specified in Annex VII is required, most of the necessary data for classification and labelling appear in the 'base set'. This classification and labelling must be reviewed, if necessary, when further information is available (Annex VIII).

— As regards other substances (e.g. those referred to in Article 5 (2)), the data required for classification and labelling may if necessary be obtained from a number of different sources, for example the results of previous tests, information required by international rules on the transport of dangerous substances, information taken from reference works and the literature or information derived from practical experience.

The guidance criteria set out in this Annex are directly applicable when the data in question have been obtained from test methods comparable with those described in Annex V. In other cases, the available

data must be evaluated by comparing the test methods employed with those indicated in Annex V and the rules specified in this Annex for determining the appropriate classification and labelling criteria.

2.2 Physico-chemical properties

2.2.1. The test methods relating to explosive, oxidizing and flammable properties included in Annex V to this Directive serve to give specific meaning to the general definitions given in Article 2 (2) (a) to (e). Criteria follow directly from the test methods in Annex V as far as they are mentioned.

2.2.2. If adequate information is available to demonstrate in practice that the physico-chemical properties of substances and preparations (apart from organic peroxides) are different from those revealed by the test methods given in Annex V, then such substances and preparations should be classified according to the hazard they present, if any, to those handling the substances and preparations or to other persons.

2.2.3. Organic peroxides are classified as dangerous on the basis of their structure (e.g. R-O-O-H; R₁-O-O-R₂). In general terms, organic peroxides shall be classified as oxidizing, and labelled as under 2.4.2, unless:

- tests carried out in accordance with the methods given in Annex V show the organic peroxide, in the form in which it is placed on the market, to have explosive properties, as under 2.4.1, or
- the organic peroxide is so diluted or phlegmatized that it has neither explosive, oxidizing nor flammable properties.

2.3 Toxicological properties

2.3.1. Classification is concerned with both the acute and long-term effects of these substances and preparations, whether resulting from a single instance of exposure or repeated or prolonged exposure.

2.3.2. Substances and preparations should generally be classified in accordance with the acute toxicity of the marketed product, expressed as LD₅₀ or LC₅₀ as determined by tests on experimental animals. Reference values are given in part I of Annex VI.

If the facts show the existence of effects other than the acute effects indicated by experiments with animals, e.g. carcinogenic, mutagenic, allergenic, sub-acute or chronic effects, the substances or preparations shall be classified according to the magnitude of these effects.

If adequate evidence is available to demonstrate in practice that the toxic effect of substances and preparations on man is, or is likely to be different from that suggested by the experimental results obtained in animal tests then such substances and preparations should be classified according to their toxicity in man.

2.3.3. When the classification is to be established from experimental results obtained in animal tests, the results should have validity for man in that the tests reflect, in an appropriate way, the risks to man.

2.4 Criteria for classification, choice of symbols, indication of danger and choice of risk phrases

Classification must cover both the toxicological and the physico-chemical properties of substances and preparations. The object of choosing risk phrases is to ensure that the specific nature of the potential dangers identified in classification are expressed on the label. For this purpose it is necessary to consider the criteria given for the choice of symbol(s) and risk phrases in each of the sections 2.4.1 to 2.4.11 and chapter 3, for example classification under 2.4.6 does not imply that the sections such as 2.4.7 or 2.4.9 can be ignored.

The criteria are applicable to gaseous substances and preparations but only in so far as they may be subject to the packaging and labelling provisions of this Directive or the separate Directive on preparations.

Notwithstanding the criteria given under 2.4.3, 2.4.4 and 2.4.5, substances and preparations in the form of aerosols shall be subject to the flammability criteria set out in paragraphs 1.8 and 2.2 (c) of the Annex to Directive 75/324/EEC.

2.4.1. *Explosive*

Substances and preparations shall be classified as explosive and assigned the symbol 'E' and the indication of danger 'explosive' in accordance with the results of the tests given in Annex V and in so far as the substances and preparations are explosive as placed on the market. One risk phrase is obligatory, it is to be specified on the basis of the following:

- R 2 Risk of explosion by shock, friction, fire or other sources of ignition**
— substances and preparations including certain organic peroxides but excepting those set out below.
- R 3 Extreme risk of explosion by shock, friction, fire or other sources of ignition**
— substances and preparations which are particularly sensitive such as picric acid salts, PETN and certain undiluted organic peroxides such as dibenzoyl peroxide.

2.4.2. *Oxidizing*

Substances and preparations shall be classified as oxidizing and assigned the symbol 'O' and the indication of danger 'oxidizing' in accordance with the results of the tests given in Annex V (see also 2.2.3). One risk phrase is obligatory, it is to be specified on the basis of the test results but subject to the following:

- R 11 Highly flammable**
— organic peroxides which have flammable properties even when not in contact with other combustible material.
- R 8 Contact with combustible material may cause fire**
— other oxidizing substances and preparations which may cause fire or enhance the risk of fire when in contact with combustible material.
- R 9 Explosive when mixed with combustible material**
— other substances and preparations which become explosive when mixed with combustible materials, e.g. certain chlorates.

2.4.3. *Extremely flammable*

Substances and preparations shall be classified as extremely flammable and assigned the symbol 'F+' and the indication of danger 'extremely flammable' in accordance with the results of the tests given in Annex V. The risk phrase shall be assigned in accordance with the following criteria:

- R 12 Extremely flammable**
— Liquid substances and preparations which have a flash point lower than 0 °C and a boiling point (or in case of a boiling range the initial boiling point) lower than or equal to 35 °C.

2.4.4. *Highly flammable*

Substances and preparations shall be classified as highly flammable and assigned the symbol 'F' and the indication of danger 'highly flammable' in accordance with the results of the tests given in Annex V. Risk phrases shall be assigned in accordance with the following criteria:

- R 17 **Spontaneously flammable in air**
— substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any input of energy.
- R 11 **Highly flammable**
— solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition;
— liquid substances and preparations having a flash point below 21 °C but are not extremely flammable.
- R 12 **Extremely flammable**
— gaseous substances and preparations which are flammable in air at normal pressure.
- R 13 **Extremely flammable liquefied gas**
— gaseous substances and preparations which are flammable in air at normal pressure when put on the market in liquefied form.
- R 15 **Contact with water liberates highly flammable gases**
— substances and preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities, at a minimum rate of 1 litre/kg/h.

2.4.5. *Flammable*

Substances and preparations shall be classified as flammable in accordance with the results of the tests given in Annex V. The risk phrase shall be assigned in accordance with the criteria mentioned below.

- R 10 **Flammable**
— liquid substances and preparations having a flash point equal to or greater than 21 °C, and less than or equal to 55 °C.

However, in practice it has been shown that a preparation having a flash point equal to or greater than 21 °C and less than or equal to 55 °C need not be classified as flammable if the preparation could not in any way support combustion and only so long as there is no reason to fear risks to those handling these preparations or to other persons.

2.4.6. *Very toxic*

Substances and preparations shall be classified as very toxic and assigned the symbol 'T+' and the indication of danger 'very toxic' in accordance with the criteria given in part I of Annex VI, as specified below.

Risk phrases shall be assigned in accordance with the following criteria:

- R 28 **Very toxic if swallowed**
— acute toxicity results:
LD₅₀ oral, rat: ≤ 25 mg/kg
- R 27 **Very toxic in contact with skin**
— acute toxicity results:
LD₅₀ dermal, rat or rabbit: ≤ 50 mg/kg
- R 26 **Very toxic by inhalation**
— acute toxicity results:
LC₅₀ inhalation, rat: ≤ 0,5 mg/litre/4 h
- R 39 (*) **Danger of very serious irreversible effects**
— Strong evidence that irreversible damage other than the effects referred to in chapter 3 is likely to be caused by a single exposure by an appropriate route, generally in the abovementioned dose range (see also 2.3.2 and 2.3.3).

(*) R 26, R 27 or R 28 is also to be assigned to indicate route of administration/exposure.

2.4.7. Toxic

Substances and preparations shall be classified as toxic and assigned the symbol 'T' and the indication of danger 'toxic' in accordance with the criteria given in part I of Annex VI, as specified below. Risk phrases shall also be assigned in accordance with the following criteria:

R 25 Toxic if swallowed

- acute toxicity results:
LD₅₀ oral, rat: $25 < LD_{50} \leq 200$ mg/kg

R 24 Toxic in contact with skin

- acute toxicity results:
LD₅₀ dermal, rat or rabbit: $50 < LD_{50} \leq 400$ mg/kg

R 23 Toxic by inhalation

- acute toxicity results:
LC₅₀ inhalation, rat: $0,5 < LC_{50} \leq 2$ mg/litre/4 h

R 39 (*) Danger of very serious irreversible effects

- strong evidence that irreversible damage other than the effects referred to in chapter 3 is likely to be caused by a single exposure by an appropriate route, generally in the abovementioned dose range (see also 2.3.2 and 2.3.3).

R 48 (*) Danger of serious damage to health by prolonged exposure

- serious damage (clear functional disturbance or morphological change which have toxicological significance) is likely to be caused by repeated or prolonged exposure, by an appropriate route, at levels significantly lower than those quoted in section 2.4.8 (see also 2.3.2 and 2.3.3).

2.4.8. Harmful

Substances and preparations shall be classified as harmful and assigned the symbol 'Xn' and the indication of danger 'harmful' in accordance with the criteria given in part I of Annex VI as specified below. Risk phrases shall also be assigned in accordance with the following criteria:

R 22 Harmful if swallowed

- acute toxicity results:
LD₅₀ oral, rat: $200 < LD_{50} \leq 2\ 000$ mg/kg

R 21 Harmful in contact with skin

- acute toxicity results:
LD₅₀ dermal, rat or rabbit: $400 < LD_{50} \leq 2\ 000$ mg/kg

R 20 Harmful by inhalation

- acute toxicity results:
LC₅₀ inhalation, rat: $2 < LC_{50} \leq 20$ mg/litre/4 h

R 40 () Possible risk of irreversible effects**

- strong evidence that irreversible damage other than the effects referred to in chapter 3 is likely to be caused by a single exposure by an appropriate route, generally in the abovementioned dose range (see also 2.3.2 and 2.3.3).

(*) R 23, R 24 or R 25 is also to be assigned to indicate route of administration/exposure.

(**) R 20, R 21 or R 22 is also to be assigned to indicate route of administration/exposure.

R 48 (*) Danger of serious damage to health by prolonged exposure

- serious damage (clear functional disturbance or morphological change which have toxicological significance) is likely to be caused by repeated or prolonged exposure by an appropriate route, at levels of the order of (see also 2.3.2 and 2.3.3):

- oral, rat ≤ 50 mg/kg (body weight)/day (**),
- dermal, rat or rabbit ≤ 100 mg/kg (body weight)/day (**),
- inhalation, rat $\leq 0,5$ mg/litre 6 h/day (**),

These guide values can apply directly when severe lesions have been observed in a sub-chronic (90 days) toxicity study, but also serve as a guide when interpreting the results of sub-acute (28 days) or chronic (two years) toxicity tests.

R 42 May cause sensitization by inhalation

- if practical evidence is available which shows the substances and preparations to be capable of inducing a sensitization reaction in humans by inhalation, at a greater frequency than would be expected from the response of a normal population.

2.4.9. Corrosive

Substances and preparations shall be classified as corrosive and assigned the symbol 'C' and the indication of danger 'corrosive' in accordance with the criteria given in Annex VI (B). Risk phrases shall be assigned in accordance with the following criteria:

R 35 Causes severe burns

- if, when applied to healthy intact animal skin, full thickness destruction of skin tissue occurs as a result of up to three minutes exposure, or if this result can be predicted.

R 34 Causes burns

- if, when applied to healthy intact animal skin, full thickness destruction of skin tissue occurs as a result of up to four hours exposure, or if this result can be predicted.

2.4.10. Irritant

Non-corrosive substances and preparations shall be classified as irritant and assigned the symbol 'Xi' and the indication of danger 'irritant' in accordance with the criteria given in Annex VI (B) and as specified below. Risk phrases shall also be assigned in accordance with the following criteria:

R 38 Irritating to skin

- if, when applied to healthy intact animal skin for up to four hours, significant inflammation is caused and which is present 24 hours or more after the end of the exposure period.

Inflammation is significant, if the mean value of the scores is two or more for either erythema and eschar formation or oedema formation. The same shall be the case where the test has been completed using three animals if the score for either erythema and eschar formation or oedema formation observed in two or more animals is equivalent to the value of two or more.

R 36 Irritating to eyes

- if, when applied to the eye of the animal, significant ocular lesions are caused and which are present 24 hours or more after instillation of the test material.

Ocular lesions are significant, if the means of the scores have any of the values: cornea opacity equal to or greater than two but less than three; iris lesion equal to or greater than one but not greater than 1,5; redness of the conjunctivae equal to or greater than 2,5; oedema of the conjunctivae (chemosis) equal to or greater than 2. The same shall be the case where the test has been completed using three animals if the lesions, on two or more animals, are equivalent to any of the above values except that for iris lesion the value should be equal to or greater than one but less than two and for redness of conjunctivae the value should be equal to three.

(*) R 20, R 21 or R 22 is also to be assigned to indicate route of administration/exposure.

(**) These values are not intended to influence in any way the choice of dose levels in carrying out the tests of Annex V.

- R 41 (*) **Risk of serious damage to eyes**
- if when applied to the eye of the animal severe ocular lesions are caused and which are present 24 hours or more after instillation of the test material.
- Ocular lesions are severe if the means of the scores have any of the values:
cornea opacity equal to or greater than three; iris lesion greater than 1,5. The same shall be the case where the test has been completed using three animals if these lesions, on two or more animals, have any of the values:
cornea opacity equal to or greater than three; iris lesion equal to two.
- R 43 **May cause sensitization by skin contact**
- if practical experience shows the substances and preparations to be capable of inducing a sensitization reaction in a substantial number of persons by skin contact, or on the basis of a positive response in experimental animals.
- In the case of the test method for skin sensitization detailed in Annex V or in the case of other adjuvant-type test methods, a response of at least 30 % of the animals is considered positive. For any other test method a response of at least 15 % of the animals is considered positive.
- R 37 **Irritating to respiratory system**
- substances and preparations which cause serious irritation to the respiratory system, based normally on practical observation.

2.4.11. *Other properties*

Additional risk phrases shall be assigned to substances and preparations, classified by virtue of 2.4.1 to 2.4.10 above, in accordance with the following criteria (based on experience obtained during compilation of Annex I):

- R 1 **Explosive when dry**
For explosive substances and preparations put on the market in solution or in a wetted form; e.g. nitrocellulose with more than 12,6 % nitrogen.
- R 4 **Forms very sensitive explosive metallic compounds**
For substances and preparations which may form sensitive explosive metallic derivatives, e.g. picric acid, styphnic acid.
- R 5 **Heating may cause an explosion**
For thermally unstable substances and preparations not classified as explosive, e.g. perchloric acid > 50 %.
- R 6 **Explosive with or without contact with air**
For substances and preparations which are unstable at ambient temperatures, e.g. acetylene.
- R 7 **May cause fire**
For reactive substances and preparations: e.g. fluorine, sodium hydrosulphite.
- R 14 **Reacts violently with water**
For substances and preparations which react violently with water, e.g. acetyl chloride, alkali metals, titanium tetrachloride.
- R 16 **Explosive when mixed with oxidizing substances**
For substances and preparations which react explosively with an oxidizing agent, e.g. red phosphorus.
- R 18 **In use, may form flammable/explosive vapour-air mixture**
For preparations not in themselves classified as flammable, which contain volatile components which are flammable in air.

(*) The use of R 34 or R 35 precludes the use of R 41.

- R 19 May form explosive peroxides**
For substances and preparations which may form explosive peroxides during storage, e.g. diethyl ether, 1,4-dioxan.
- R 29 Contact with water liberates toxic gas**
For substances and preparations which in contact with water or damp air, evolve very toxic/toxic gases in potentially dangerous amounts, e.g. aluminium phosphide, phosphorus pentasulphide.
- R 30 Can become highly flammable in use**
For preparations not in themselves classified as flammable, which may become flammable due to the loss of non-flammable volatile components.
- R 31 Contact with acids liberates toxic gas**
For substances and preparations which react with acids to evolve toxic gases in dangerous amounts; e.g. sodium hypochlorite, barium polysulphides. For substances used by members of the general public, the use of S 50 (do not mix with . . . (to be specified by the manufacturer)) would be more suitable.
- R 32 Contact with acids liberates very toxic gas**
For substances and preparations which react with acids to evolve very toxic gases in dangerous amounts; e.g. salts of hydrogen cyanide, sodium azide. For substances used by members of the general public, the use of S 50 (do not mix with . . . (to be specified by the manufacturer)) would be more suitable.
- R 33 Danger of cumulative effects**
For substances and preparations when accumulation in the human body is likely and may cause some concern which, however, is not sufficient to justify the use of R 48.
Previously assigned to substances of Annex I and preparations which were likely to cause damage to health by prolonged exposure or which were likely to be retained and then accumulated within the human body. Now to be progressively replaced when appropriate by R 48.
- R 44 Risk of explosion if heated under confinement**
For substances and preparations not in themselves classified as explosive in accordance with 2.4.1 above but which may nevertheless display explosive properties in practice if heated under sufficient confinement. For example, certain substances which would decompose explosively if heated in a steel drum do not show this effect if heated in less-strong containers.

3. ADDITIONAL CRITERIA CONCERNING SPECIFIC EFFECTS OF SUBSTANCES ON HEALTH

For the record: further guidance applicable to preparations will be published later.

- 3.1. Procedure for the classification of substances which may possibly have the effects mentioned in this chapter**
- 3.1.1.** If a manufacturer or his representative has information available which indicates that a substance should be classified and labelled in accordance with the criteria given in section 3.2, 3.3 or 3.4, he or his representative shall provisionally label the substance with R 40 and assign at least the symbol 'Xn' unless the conclusions reached by the application of the criteria mentioned in 2.4.6 to 2.4.10 indicate the need for a more severe classification.
- 3.1.2.** Furthermore, the manufacturer or his representative is requested to submit as soon as possible a document summarizing all relevant information to one Member State in which the substance is placed on the market. This summary document should include a bibliography containing all relevant references and may include any relevant unpublished data.

- 3.1.3. In order to obtain as quickly as possible a harmonized classification for the Community by the procedure defined in Article 21, Member States which have relevant information available justifying the classification of a substance in one of these categories, whether submitted by the manufacturer or not, should forward such information together with suggestions for classification and labelling, to the Commission as soon as possible.

The Commission will forward to the other Member States the classification and labelling proposal that it receives. Any Member State may ask the Commission for the information it has received.

Any Member State which has good reason to believe that the suggested classification and labelling is inappropriate as far as the carcinogenic, mutagenic or teratogenic effects are concerned shall notify the Commission thereof.

- 3.1.4. The provisional labelling applied by a manufacturer or his representative shall remain valid until the entry into force of a decision on the inclusion or non-inclusion of the substance concerned in Annex I.

3.2. Carcinogenic substances

- 3.2.1. For the purpose of classification and labelling, and having regard to the current state of knowledge, such substances are divided into three categories:

Category 1

Substances known to be carcinogenic to man. There is sufficient evidence to establish a causal association between human exposure to a substance and the development of cancer.

Category 2

Substances which should be regarded as if they are carcinogenic to man. There is sufficient evidence to provide a strong presumption that human exposure to a substance may result in the development of cancer, generally on the basis of:

- appropriate long-term animal studies,
- other relevant information.

Category 3

Substances which cause concern for man owing to possible carcinogenic effects but in respect of which the available information is not adequate for making a satisfactory assessment. There is some evidence from appropriate animal studies, but this is insufficient to place the substance in category 2.

- 3.2.2. The following specific risk phrases apply:

Categories 1 and 2:

R 45 **May cause cancer**

Category 3:

R 40 **Possible risk of irreversible effects**

- 3.2.3. The following classifications and symbols apply:

Categories 1 and 2: at least: **Toxic**

Category 3: **Harmful**

The conclusions reached by application of the criteria mentioned in 2.4.6 to 2.4.10 may indicate the need of a more severe classification.

3.3. Mutagenic substances

- 3.3.1. For the purposes of classification and labelling, and having regard to the current state of knowledge, such substances are divided into three categories:

Category 1

Substances known to be mutagenic to man.

There is sufficient evidence to establish a causal association between human exposure to a substance and heritable genetic damage.

Category 2

Substances which should be regarded as if they are mutagenic to man.

There is sufficient evidence to provide a strong presumption that human exposure to the substance may result in the development of heritable genetic damage, generally on the basis of:

- appropriate animal studies,
- other relevant information.

Category 3

Substances which cause concern for man owing to possible mutagenic effects but in respect of which the available information does not satisfactorily demonstrate heritable genetic damage. There is evidence from appropriate mutagenicity studies, but this is insufficient to place the substance in category 2.

3.3.2. The following specific risk phrases apply:

Categories 1 and 2:

R 46 May cause heritable genetic damage

Category 3:

R 40 Possible risk of irreversible effects

3.3.3. The following classifications and symbols apply:

Category 1: at least: **Toxic**

Categories 2 and 3: **Harmful**

The conclusions reached by the application of the criteria mentioned in 2.4.6 to 2.4.10 may indicate the need for a more severe classification.

3.4. **Teratogenic substances**

3.4.1. For the purposes of classification and labelling, and having regard to the current state of knowledge, such substances are divided into two categories:

Category 1

Substances known to be teratogenic to man.

There is sufficient evidence to establish a causal association between human exposure to a substance and subsequent non-heritable birth defects in offspring.

Category 2

Substances which should be regarded as if they are teratogenic to man.

There is sufficient evidence to provide a strong presumption that human exposure to the substance may result in non-heritable birth defects in offspring, generally on the basis of:

- appropriate animal studies,
- other relevant information.

3.4.2. The following specific risk phrases apply:

Categories 1 and 2

R 47 May cause birth defects

3.4.3. The following classifications and symbols apply:

Category 1: at least: **Toxic**

Category 2: **Harmful**

The conclusions reached by the application of the criteria mentioned in 2.4.6 to 2.4.10 may indicate the need for a more severe classification.

4. CHOICE OF SAFETY ADVICE PHRASES

Safety advice phrases (S phrases) shall be assigned to substances and preparations in accordance with the following general criteria:

S 1 **Keep locked up**

- Applicability
 - Very toxic and toxic substances and preparations.
- Criteria for use
 - Recommended for very toxic and toxic substances and preparations likely to be used by members of the general public.

S 2 **Keep out of reach of children**

- Applicability
 - All dangerous substances and preparations.
- Criteria for use
 - *Obligatory* only for all dangerous substances and preparations likely to be used by members of the general public or likely to be used in places to which the general public have access unless there is no reason to fear any danger particularly to children.

S 3 **Keep in a cool place**

- Applicability
 - Organic peroxides.
 - Other dangerous substances and preparations having a boiling point ≤ 40 °C.
- Criteria for use
 - *Obligatory* for organic peroxides unless S 47 is used.
 - Recommended for other dangerous substances and preparations having a boiling point ≤ 40 °C.

S 4 **Keep away from living quarters**

- Applicability
 - Very toxic and toxic substances and preparations.
- Criteria for use
 - Normally limited to very toxic and toxic substances and preparations when desirable to supplement S 13; for example when there is an inhalation risk and the substance or preparation should be stored away from living quarters. The advice is not intended to preclude proper use of the substance or preparation in living quarters.

S 5 **Keep contents under . . . (appropriate liquid to be specified by the manufacturer)**

- Applicability
 - Spontaneously flammable solid substances and preparations.
- Criteria for use
 - Normally limited to special cases, e.g. sodium, potassium or white phosphorous.

- S 6 **Keep under . . .** (inert gas to be specified by the manufacturer)
- Applicability
 - Dangerous substances and preparations which must be kept under an inert atmosphere.
 - Criteria for use
 - Normally limited to special cases, e.g. certain organo metallic compounds.
- S 7 **Keep container tightly closed**
- Applicability
 - Organic peroxides.
 - Substances and preparations which can give off very toxic, toxic, harmful, extremely flammable or highly flammable vapours.
 - Substances and preparations which on contact with moisture give off highly flammable gases.
 - Highly flammable solids.
 - Criteria for use
 - *Obligatory* for organic peroxides in the combination of S 3/7/9.
 - Recommended for the other fields of application mentioned above.
- S 8 **Keep container dry**
- Applicability
 - Substances and preparations which may react violently with water.
 - Substances and preparations which on contact with water liberate highly flammable gases.
 - Substances and preparations which on contact with water liberate very toxic or toxic gases.
 - Criteria for use
 - Normally limited to the fields of application mentioned above when necessary to reinforce warnings given by R 14, R 15 in particular, and R 29.
- S 9 **Keep container in a well-ventilated place**
- Applicability
 - Organic peroxides.
 - Volatile substances and preparations which may give off very toxic, toxic or harmful vapours.
 - Extremely flammable or highly flammable liquids and gases.
 - Criteria for use
 - *Obligatory* for organic peroxides in the combination S 3/7/9.
 - Recommended for volatile substances and preparations which may give off very toxic, toxic or harmful vapours.
 - Recommended for extremely flammable or highly flammable liquids or gases.
- S 12 **Do not keep the container sealed**
- Applicability
 - Substances and preparations which will by giving off gases or vapours be liable to burst the container.
 - Criteria for use
 - Normally limited to the special cases mentioned above.

- S 13 **Keep away from food, drink and animal feedingstuffs**
- Applicability
 - Very toxic, toxic and harmful substances and preparations.
 - Criteria for use
 - Recommended when such substances and preparations are likely to be used by members of the general public.
- S 14 **Keep away from . . . (incompatible materials to be indicated by the manufacturer)**
- Applicability
 - Organic peroxides.
 - Criteria for use
 - *Obligatory* for and normally limited to organic peroxides. However, may be useful in exceptional cases when incompatibility is likely to produce a particular risk.
- S 15 **Keep away from heat**
- Applicability
 - Substances and preparations which may decompose or which may react spontaneously under the effect of heat.
 - Criteria for use
 - Normally limited to special cases, e.g. monomers but not assigned if risk phrases R 2, R 3 and/or R 5 have already been applied.
- S 16 **Keep away from sources of ignition — No smoking**
- Applicability
 - Extremely flammable or highly flammable liquids and gases.
 - Criteria for use
 - Recommended for the substances and preparations mentioned above but not assigned if risk phrases R 2, R 3 and/or R 5 have already been applied.
- S 17 **Keep away from combustible material**
- Applicability
 - Substances and preparations which may form explosive or spontaneously flammable mixtures with combustible material.
 - Criteria for use
 - Available for use in special cases; e.g. to emphasize R 8 and R 9.
- S 18 **Handle and open container with care**
- Applicability
 - Substances and preparations liable to produce an overpressure in the container.
 - Substances and preparations which may form explosive peroxides.
 - Criteria for use
 - Normally limited to the abovementioned cases when there is risk of damage to the eyes and/or when the substances and preparations are likely to be used by members of the general public.

S 20 When using do not eat or drink

- Applicability
 - Very toxic, toxic and corrosive substances and preparations.
- Criteria for use
 - Normally limited to special cases (e.g. arsenic and arsenic compounds; fluoracetates) in particular when any of these are likely to be used by members of the general public.

S 21 When using do not smoke

- Applicability
 - Substances and preparations which produce toxic products on combustion.
- Criteria for use
 - Normally limited to special cases (e.g. halogenated compounds).

S 22 Do not breathe dust

- Applicability
 - All solid dangerous substances and preparations.
- Criteria for use
 - Recommended for those substances and preparations mentioned above which are liable to form inhalable dusts, and when it is necessary to draw the attention of the user to inhalation risks not mentioned in the risk phrases which have been ascribed. However may be used in exceptional cases to emphasize such risk phrases, in particular to emphasize R 42.

S 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer)

- Applicability
 - All liquid or gaseous dangerous substances and preparations.
- Criteria for use
 - Recommended when it is necessary to draw the attention of the user to inhalation risks not mentioned in the risk phrases which have to be ascribed. However, may be used in exceptional cases to emphasize such risk phrases, in particular to emphasize R 42.
 - Recommended for substances and preparations in the form of aerosols which are likely to be used by members of the general public.

S 24 Avoid contact with skin

- Applicability
 - All dangerous substances and preparations.
- Criteria for use
 - Recommended when it is necessary to draw the attention of the user to skin contact risks, not mentioned in the risk phrases which have to be ascribed. However, may be used in exceptional cases to emphasize such risk phrases, in particular to emphasize R 43.

S 25 Avoid contact with eyes

- Applicability
 - Corrosive or irritant substances and preparations.
- Criteria for use
 - Normally limited to special cases, i.e. when it is considered essential to emphasize the risk to eyes denoted by use of R 34, R 35, R 36 or R 41. Thus important if these substances and preparations are likely to be used by members of the general public and eye or face protection may not be available.

- S 26 **In case of contact with eyes, rinse immediately with plenty of water and seek medical advice**
- Applicability
 - Corrosive or irritant substances and preparations.
 - Criteria for use
 - *Obligatory* for corrosive substance and preparations and those to which R 41 has already been ascribed.
 - Recommended for irritant substances to which the risk phrase R 36 has already been ascribed.
- S 27 **Take off immediately all contaminated clothing**
- Applicability
 - Organic peroxides.
 - Very toxic, toxic or corrosive substances and preparations.
 - Criteria for use
 - *Obligatory* for organic peroxides.
 - Recommended for very toxic and toxic substances and preparations which are easily absorbed by the skin and for corrosive substances and preparations unless safety phrase S 36 can be considered sufficient by itself.
- S 28 **After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer)**
- Applicability
 - Very toxic, toxic or corrosive substances and preparations.
 - Criteria for use
 - Recommended for the substances and preparations mentioned above, in particular when water is not the most appropriate rinsing fluid.
- S 29 **Do not empty into drains**
- Applicability
 - Extremely or highly flammable liquids.
 - Criteria for use
 - Recommended for those extremely or highly flammable liquids which are immiscible with water. The intention is to avoid accidents (e.g. fire, explosion) and not to emphasize general pollution problems.
- S 30 **Never add water to this product**
- Applicability
 - Substances and preparations which react violently with water.
 - Criteria for use
 - Normally limited to special cases (e.g. sulphuric acid) and may be used, as appropriate to give the clearest possible information, either to emphasize R 14 or as an alternative to R 14.
- S 33 **Take precautionary measures against static discharges**
- Applicability
 - Extremely or highly flammable substances and preparations.
 - Criteria for use
 - Recommended for substances and preparations used in industry which do not absorb moisture. Virtually never used for substances and preparations as placed on the market for use by members of the general public.

- S 34 Avoid shock and friction**
- Applicability
 - Explosive substances and preparations.
 - Criteria for use
 - *Obligatory* for and normally limited to explosive organic peroxides.
- S 35 This material and its container must be disposed of in a safe way**
- Applicability
 - Explosive substances and preparations.
 - Very toxic and toxic substances and preparations.
 - Criteria for use
 - *Obligatory* for explosive substances and preparations other than organic peroxides.
 - Recommended for very toxic and toxic substances and preparations, particularly when such substances and preparations are likely to be used by members of the general public.
- S 36 Wear suitable protective clothing**
- Applicability
 - Very toxic, toxic or harmful substances and preparations.
 - Corrosive substances and preparations.
 - Criteria for use
 - Recommended for substances and preparations used in industry which are:
 - very toxic, toxic or corrosive, and/or
 - harmful and easily absorbed by the skin and/or
 - liable to damage health by prolonged exposure.
- S 37 Wear suitable gloves**
- Applicability
 - Very toxic, toxic, harmful or corrosive substances and preparations.
 - Organic peroxides.
 - Substances and preparations irritating to the skin.
 - Criteria for use
 - Recommended for very toxic, toxic and corrosive substances and preparations, when S 36 is not used (e.g. viz general public).
 - Recommended for organic peroxides as combination S 37/39.
 - Recommended for substances and preparations irritating to the skin particularly when R 38 is not shown on the label.
- S 38 In case of insufficient ventilation wear suitable respiratory equipment**
- Applicability
 - Very toxic or toxic substances and preparations.
 - Criteria for use
 - Normally limited to special cases involving the use of very toxic or toxic substances and preparations in industry or in agriculture.

- S 39 **Wear eye/face protection**
- Applicability
 - Organic peroxides.
 - Corrosive substances and preparations, including irritants which give rise to risk of serious damage to the eyes.
 - Very toxic and toxic substances and preparations.
 - Criteria for use
 - Recommended for organic peroxides as the combination S 37/39.
 - Recommended for the corrosive substances and preparations mentioned above, in particular when there is a risk of splashing.
 - Normally limited to exceptional cases for very toxic and toxic substances and preparations, where there is a risk of splashing and they are likely to be easily absorbed by the skin.
- S 40 **To clean the floor and all objects contaminated by this material use . . . (to be specified by the manufacturer)**
- Applicability
 - All dangerous substances and preparations.
 - Criteria for use
 - Normally limited to those dangerous substances and preparations for which water is not considered to be a suitable cleansing agent (e.g. where absorption by powdered material, dissolution by solvent etc. is necessary) and where it is important for health and or safety reasons to provide a warning on the label.
- S 41 **In case of fire and/or explosion do not breathe fumes**
- Applicability
 - Dangerous substances and preparations which on combustion give off very toxic or toxic gases.
 - Criteria for use
 - Normally limited to special cases.
- S 42 **During fumigation/spraying wear suitable respiratory equipment (appropriate wording to be specified by the manufacturer)**
- Applicability
 - Substances and preparations intended for such use but which may endanger the health and safety of the user unless proper precautions are taken.
 - Criteria for use
 - Normally limited to special cases.
- S 43 **In case of fire use . . . (indicate in the space the precise type of fire-fighting equipment. If water increases the risk add: Never use water)**
- Applicability
 - Extremely flammable, highly flammable and flammable substances and preparations.
 - Criteria for use
 - *Obligatory* for substances and preparations which in contact with water or damp air, evolve highly flammable gases.
 - Recommended for extremely flammable, highly flammable and flammable substances and preparations, particularly when they are immiscible with water.
- S 44 **If you feel unwell seek medical advice (show the label where possible)**
- Applicability
 - Toxic substances and preparations.
 - Criteria for use
 - *Obligatory* for the substances and preparations mentioned above when used in industry and not likely to be used by members of the general public.

- S 45 **In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)**
- Applicability
 - Very toxic substances and preparations.
 - Toxic substances and preparations.
 - Criteria for use
 - *Obligatory* for the very toxic substances and preparations mentioned above.
 - *Obligatory* for toxic substances and preparations mentioned above when likely to be used by members of the general public.
- S 46 **If swallowed, seek medical advice immediately and show this container or label**
- Applicability
 - All dangerous substances and preparations other than those which are toxic or very toxic.
 - Criteria for use
 - *Obligatory* for all dangerous substances and preparations mentioned above which are likely to be used by members of the general public, unless there is no reason to fear any danger from swallowing, particularly by children.
- S 47 **Keep at temperature not exceeding . . . °C (to be specified by the manufacturer)**
- Applicability
 - Substances and preparations which become unstable at a certain temperature.
 - Criteria for use
 - Normally limited to special cases (e.g. certain organic peroxides).
- S 48 **Keep wetted with . . . (appropriate material to be specified by the manufacturer)**
- Applicability
 - Substances and preparations which may become very sensitive to sparks, friction or impact if allowed to dry out.
 - Criteria for use
 - Normally limited to special cases, e.g. nitrocelluloses.
- S 49 **Keep only in the original container**
- Applicability
 - Substances and preparations sensitive to catalytic decomposition.
 - Criteria for use
 - Normally limited to substances and preparations sensitive to catalytic decomposition; e.g. certain organic peroxides.
- S 50 **Do not mix with . . . (to be specified by the manufacturer)**
- Applicability
 - Substances and preparations which may react with the specified product to evolve very toxic or toxic gases.
 - Organic peroxides.
 - Criteria for use
 - Recommended for substances and preparations mentioned above which are likely to be used by members of the general public, when it is a better alternative to R 31 or R 32.
 - *Obligatory* with certain peroxides which may give violent reaction with accelerators or promoters.

S 51 Use only in well-ventilated areas

- Applicability
 - Substances and preparations likely to or intended to produce vapours, dusts, sprays, fumes, mists, etc. which give rise to inhalation risks or to a fire or explosion risk.
- Criteria for use
 - Recommended when use of S 38 would not be appropriate. Thus important when such substances and preparations are likely to be used by members of the general public.

S 52 Not recommended for interior use on large surface areas

- Applicability
 - Volatile, very toxic, toxic and harmful substances and preparations containing them.
- Criteria for use
 - Recommended when damage to health is likely to be caused by prolonged exposure to these substances by reason of its volatilization from large treated surfaces in the home or other enclosed places where persons congregate.

5. LABELLING PROPOSAL

- 5.1. The labelling proposal for a substance should be derived from the total number of symbols, risk phrases and safety phrases assigned
- 5.2. The labelling proposal for a preparation should be derived in a way analogous to that for a substance and in particular be based on:
- (a) determination of the risk categories according to the specific criteria laid down in each particular directive (on preparations);
 - (b) choice of the most relevant R and S phrases; whereas some risk phrases follow directly from the risk categories, other risk and safety phrases which are applicable shall be derived mainly from the R and S phrases assigned in accordance with sections 2 and 4 above to the constituent which most contributes to the dangerous properties of the preparation;
 - (c) in certain cases, particular directives give obligatory phrases for certain preparations (e.g. cyanoacrylate glues, paints intended for spraying). In these cases, these phrases shall always be mentioned.
- 5.3. Although the final choice of the most appropriate risk and safety phrases is primarily governed by the need to give all necessary information, consideration should also be given to the clarity and impact of the label. With clarity in mind, the necessary information should be expressed in a minimum number of phrases. Generally, up to four risk phrases and up to four safety phrases will be sufficient; for this purpose the combination phrases listed in Annexes III and IV are considered as single phrases. Whilst it may be possible to reduce the total number of phrases for substances and preparations classified for example as harmful, irritant or flammable, more than four risk and four safety phrases should only be specified in very particular cases.
- 5.4. When more than four risk phrases are assigned to a substance or preparation, it is generally possible to eliminate phrases which refer to the lowest degree of hazard providing that the overall effectiveness of the special warning is not thereby reduced. It is frequently found that certain such risk phrases are rendered superfluous by a suitable choice of safety phrase.

The risk phrases which correspond to the symbols indicated on the label are obligatory except that the risk phrases 'extremely flammable' or 'highly flammable' need not be indicated where they repeat the wording of the indication of danger used with a symbol.

- 5.5. The final choice of safety phrases must have regard to the risk phrases indicated on the label and to the intended use of the substance or preparation:
- safety phrases which give obvious advice in relation to risk phrases are generally omitted from the label unless used to give particular emphasis to a specific warning;
 - certain safety phrases, e.g. S 2, have particular relevance to substances and preparations intended to be used by the public, other phrases have particular relevance to persons at work. Phrases should be chosen with the intended use in view;
 - particular attention must be given, in the choice of safety phrases, to the foreseen conditions of use of certain substances and preparations, e.g. spraying or other aerosol effects.
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Commission statement

With regard to 3.1.3, and in particular to the last paragraph of 3.1.3, the Commission states that, should it envisage making use of the procedure of Article 21, it is prepared to consult in advance appropriate experts designated by Member States and having special qualifications with respect to either carcinogenicity, mutagenicity or teratogenicity.

This consultation will take place in the framework of the normal consultation procedure with national experts and/or in the framework of existing committees. The same will be the case when substances already included in Annex I must be reclassified in respect of their carcinogenic, mutagenic or teratogenic effects.
