

A62D

CHEMICAL MEANS FOR EXTINGUISHING FIRES OR FOR COMBATING OR PROTECTING AGAINST HARMFUL CHEMICAL AGENTS; CHEMICAL MATERIALS FOR USE IN BREATHING APPARATUS

Definition statement

This subclass/group covers:

Compositions:

- for fire-extinguishing;
- of materials for coverings or clothing affording protection against harmful
- chemical agents;
- of materials for transparent parts of gas-masks, respirators, breathing bags or
- helmets;
- of chemical substances for use in breathing apparatus.

Use of chemical substances in extinguishing fires.

Processes chemical, bio-chemical or physico-chemical for chemically altering harmful chemical substances into safe or less dangerous substances.

A62D 1/00

Fire-extinguishing compositions; Use of chemical substances in extinguishing fires (fireproof paints [C09D 5/18](#); fireproofing materials [C09K 21/00](#))

Definition statement

This subclass/group covers:

Compositions for fire-extinguishing

Use of chemical substances in extinguishing fires

References relevant to classification in this group

This subclass/group does not cover:

Fire prevention, fire containment or	A62C
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fire fighting, e.g. portable extinguishers or fire-fighting vehicles	
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Fireproof paints	C09D 5/18
Fireproofing materials C09K 21/00	C09K 21/00

Special rules of classification within this group

The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

A62D1/02 covered by [A62D 1/0007](#), [A62D 1/0071](#)

A62D1/04 covered by [A62D 1/0071](#)

A62D1/08 covered by [A62D 1/0007](#) to [A62D 1/0028](#), [A62D 1/0057](#), [A62D 1/0092](#)

A62D 3/00

Processes for making harmful chemical substances harmless or less harmful, by effecting a chemical change in the substances (consuming noxious gases by combustion [F23G 7/06](#))

Definition statement

This subclass/group covers:

Processes for chemically altering harmful chemical substances into safe or less-dangerous substances.

These processes can be chemical, bio-chemical or physico-chemical processes, e.g. use of special chemical reagents for chemical fixing, which result in the decomposition or transformation of the harmful chemical

substances into harmless or less harmful substances because of a change in their chemical structure.

These processes can comprise the step of dissolving or dispersing the harmful chemical substances in water for the purpose of treating them, or the step of producing, for treatment, a gaseous product from a non-gaseous harmful chemical substance.

The harmful chemical substance can be one component of a mixture, e.g. a component in contaminated sludge.

Relationship between large subject matter areas

- The disposal of solid waste or the reclamation of contaminated soil is classified elsewhere, i.e. in class B09.

- However, the treatment of a specific harmful chemical substance in solid waste resulting in the change of its chemical constitution to make it harmless or less harmful is covered by [A62D 3/00](#).

- In the same way, treatment of sludge is not classified here with the exception

of the treatment of a specific harmful chemical substance in the sludge, e.g. in residues from industrial processes (excluding contaminants from municipal sewage treatment) resulting in the change of its chemical constitution to make it harmless or less harmful.

- Preventive chemical treatments, e.g. to prevent the formation of harmful chemical substances are classified elsewhere, depending on the kind of treatment and/or the context of application.

- Chemical or physico-chemical type processes where eradicating or diminishing the dangerousness of harmful chemical substances produces useful products (e.g. cement) are not covered here.

These types of processes are covered by the appropriate subclass for making

the specific product.

- However in situations where processes for making products include a subset

of process steps with eradicating or diminishing the dangerousness of a harmful chemical substance as its fundamental goal, and this subset is in itself novel and unobvious, this subset is covered by group [A62D 3/00](#).

- When enzymes or microorganisms are used within processes fully provided

for in subclass [A62D](#) in order to liberate, separate or purify a pre-existing compound or composition or to treat or clean textiles or solid material surfaces,

they should also be classified in subclass [C12S](#) based upon its Note (1) to provide a complete search.

References relevant to classification in this group

This subclass/group does not cover:

Detoxification of foods or foodstuffs	A23L 1/015
Apparatus for chemical, physical or physico-chemical processes in general	B01
Treatment of gases, e.g.: chemical or biological purification of smoke or fumes, e.g. flue gas	B01D 53/54
Disposal of solid waste	B09B
Reclamation of contaminated soil	B09C
Purification or modifying the chemical compositions of combustible gases containing carbon monoxide	C10K
Exhaust or silencing apparatus having means for purifying, rendering innocuous, or otherwise treating exhaust gases	F01N 3/00

Consuming noxious gases by combustion	F23G 7/06
Chemical processes resulting in the production of a useful product, e.g.: using untreated contaminated fly ash as raw material in the manufacture of cement,	C04B 7/26
Metals obtained from residues or scrap	C22B
Treatment of radioactively-contaminated waste	G21F 9/00

Examples of places where the subject matter of this class is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Treatment of waste water, sewage or sludge	C02F
Making explosives harmless by detonation	F42D 5/04

Informative references

Attention is drawn to the following places, which may be of interest for search:

Disinfection or sterilizing methods specially adapted for refuse	A61L 11/00
Methods or apparatus for disinfecting or sterilising materials or objects other than foodstuffs or contact lenses	A61L 2/00
Waste or refuse as compounding ingredient for glass, cement, mortar, concrete, artificial stone or ceramics	C03C , C04B
Materials for absorbing liquids to remove pollution, e.g. oil, gasoline, fat	C09K 3/32

Destructive distillation of carbonaceous materials	C10B
Destructive hydrogenation of carbonaceous materials	C10G 1/06
Micro-organisms, enzymes or compositions thereof	C12N
Consuming waste by combustion	F23G
Removal or treatment of combustion products or combustion residues	F23J

Special rules of classification within this group

- In this group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

-Indexing Codes:

(1) When classifying in this group the Indexing Codes of group [A62D 2101/00](#) are to be used for identifying the origin or chemical nature of the harmful chemical substances which are made harmless or less harmful by processes already classified as such in groups [A62D 3/02](#) to **A63D3/40**

(2) When indexing a substance in groups **K62D101/02TO** [A62D 2101/08](#), indexing according to its chemical structure is also made in one or more of groups [A62D 2101/20](#) to [A62D 2101/40](#) , if of interest [C0704]

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

In this main group, the following terms or expressions are used with the meaning indicated:

Catalyst	Substance which either increases or
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	decreases the speed of a chemical reaction, without itself undergoing a permanent chemical change.
Chalcogen	Also known as chalcogenides, specifically O, S, Se, Te.
Harmful	Directly toxic to living organisms, with the exception of toxic to plants only.
Harmful chemical substances	Chemical waste substances which are too hazardous or toxic to be discarded in an ordinary municipal landfill.
Halogens	The elements F, Cl, Br ,I , At.
Physico-chemical	Having at least one chemical step and one physical step.
Sludge	Residue (normally viscous) from an industrial, residential, or agricultural process.

A62D 5/00

Composition of materials for coverings or clothing affording protection against harmful chemical agents

Definition statement

This subclass/group covers:

Materials for coverings or clothing affording protection against harmful chemical agents.

By materials is meant the chemical substances p.ex. active carbon, which are used in the covering or in the clothing, to neutralise/decompose the harmful agent.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Protective clothing affording	A62B17/006
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protection against contamination from chemicals, toxic or hostile environments	
Filtering material for liquid or gaseous fluids	B01D 39/00
Semi-permeable membranes for separation processes	B01D 69/00
Layered products	B32B
Selection of special materials for outwear	A41D 31/00
Treatment of fibres, threads, yarns, fabrics, feathers, or fibrous goods or fibrous goods made from such materials	D06M

A62D 7/00

Composition of materials for transparent parts of gas-masks, respirators, breathing bags, or helmets

Relationship between large subject matter areas

The components parts for gas-masks or gas-helmets are classified in [A62B 18/08](#) and the composition of materials for the windows or other transparent parts of gas-masks are classified in [A62D 7/00](#)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Composition for glass	C03C
Composition for transparent ceramics	C04B 35/115
Materials for application to surfaces to minimize adherence of ice, mist or water thereto	C09K 3/18
Layered products	B32B

A62D 7/02

Clear-view sheets which prevent the formation of water drops or ice (materials for minimising adherence of ice or water to surfaces [C09K 3/18](#))

Informative references

Attention is drawn to the following places, which may be of interest for search:

Materials for minimising adherence of ice or water to surfaces	C09K 3/18
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A62D 9/00

Composition of chemical substances for use in breathing apparatus (production of oxygen-generating compounds in general, processes for the production of oxygen from chemicals in general [C01B 13/00](#), [C25B 1/02](#))

Informative references

Attention is drawn to the following places, which may be of interest for search:

Production of oxygen-generating compounds in general	C01B 13/00
Processes for the production of oxygen from chemicals in general	C25B 1/02