

## 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 place 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 place covers:*

Compositions for fire-extinguishing

Use of chemical substances in extinguishing fires

#### References

##### Limiting references

*This place does not cover:*

Fire prevention, fire containment or fire fighting, e.g. portable extinguishers or fire-fighting vehicles	<a href="#">A62C</a>
---	----------------------

##### Informative references

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

Fireproof paints	<a href="#">C09D 5/18</a>
Fireproofing materials	<a href="#">C09K 21/00</a>

## 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 place 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.

### Relationships with other classification places

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](#).

### References

#### Limiting references

*This place does not cover:*

Detoxification of foods or foodstuffs	<a href="#">A23L 5/20</a>
Apparatus for chemical, physical or physico-chemical processes in general	<a href="#">B01</a>
Treatment of gases, e.g.: chemical or biological purification of smoke or fumes, e.g. flue gas	<a href="#">B01D 53/54</a>

## Limiting references

Disposal of solid waste	<a href="#">B09B</a>
Reclamation of contaminated soil	<a href="#">B09C</a>
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,	<a href="#">C04B 7/26</a>
Purification or modifying the chemical compositions of combustible gases containing carbon monoxide	<a href="#">C10K</a>
Metals obtained from residues or scrap	<a href="#">C22B</a>
Exhaust or silencing apparatus having means for purifying, rendering innocuous, or otherwise treating exhaust gases	<a href="#">F01N 3/00</a>
Consuming noxious gases by combustion	<a href="#">F23G 7/06</a>
Treatment of radioactively-contaminated waste	<a href="#">G21F 9/00</a>

**Application-oriented references**

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

Treatment of waste water, sewage or sludge	<a href="#">C02F</a>
Making explosives harmless by detonation	<a href="#">F42D 5/04</a>

**Informative references**

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

Disinfection or sterilisation of materials or objects, in general; Accessories therefor	<a href="#">A61L 2/00</a>
Disinfection or sterilizing methods specially adapted for refuse	<a href="#">A61L 11/00</a>
Waste or refuse as compounding ingredient for glass, cement, mortar, concrete, artificial stone or ceramics	<a href="#">C03C</a> , <a href="#">C04B</a>
Materials for absorbing liquids to remove pollution, e.g. oil, gasoline, fat	<a href="#">C09K 3/32</a>
Destructive distillation of carbonaceous materials	<a href="#">C10B</a>
Destructive hydrogenation of carbonaceous materials	<a href="#">C10G 1/06</a>
Microorganisms, enzymes or compositions thereof	<a href="#">C12N</a>
Consuming waste by combustion	<a href="#">F23G</a>
Removal or treatment of combustion products or combustion residues	<a href="#">F23J</a>

**Special rules of classification**

- 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](#) - [A62D 3/40](#)

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

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Catalyst	Substance which either increases or 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 place 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.

## References

### Informative references

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

Selection of special materials for outdoor	<a href="#">A41D 31/00</a>
Protective clothing affording protection against contamination from chemicals, toxic or hostile environments	<a href="#">A62B 17/006</a>
Filtering material for liquid or gaseous fluids	<a href="#">B01D 39/00</a>
Semi-permeable membranes for separation processes	<a href="#">B01D 69/00</a>
Layered products	<a href="#">B32B</a>
Treatment of fibres, threads, yarns, fabrics, feathers, or fibrous goods or fibrous goods made from such materials	<a href="#">D06M</a>

## A62D 7/00

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

### Relationships with other classification places

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](#)

### References

#### Informative references

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

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

## A62D 7/02

**Clear-view sheets which prevent the formation of water drops or ice**

### References

#### 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	<a href="#">C09K 3/18</a>
--	---------------------------

## A62D 9/00

**Composition of chemical substances for use in breathing apparatus**

### References

#### Informative references

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

Production of oxygen-generating compounds in general	<a href="#">C01B 13/00</a>
Processes for the production of oxygen from chemicals in general	<a href="#">C25B 1/02</a>