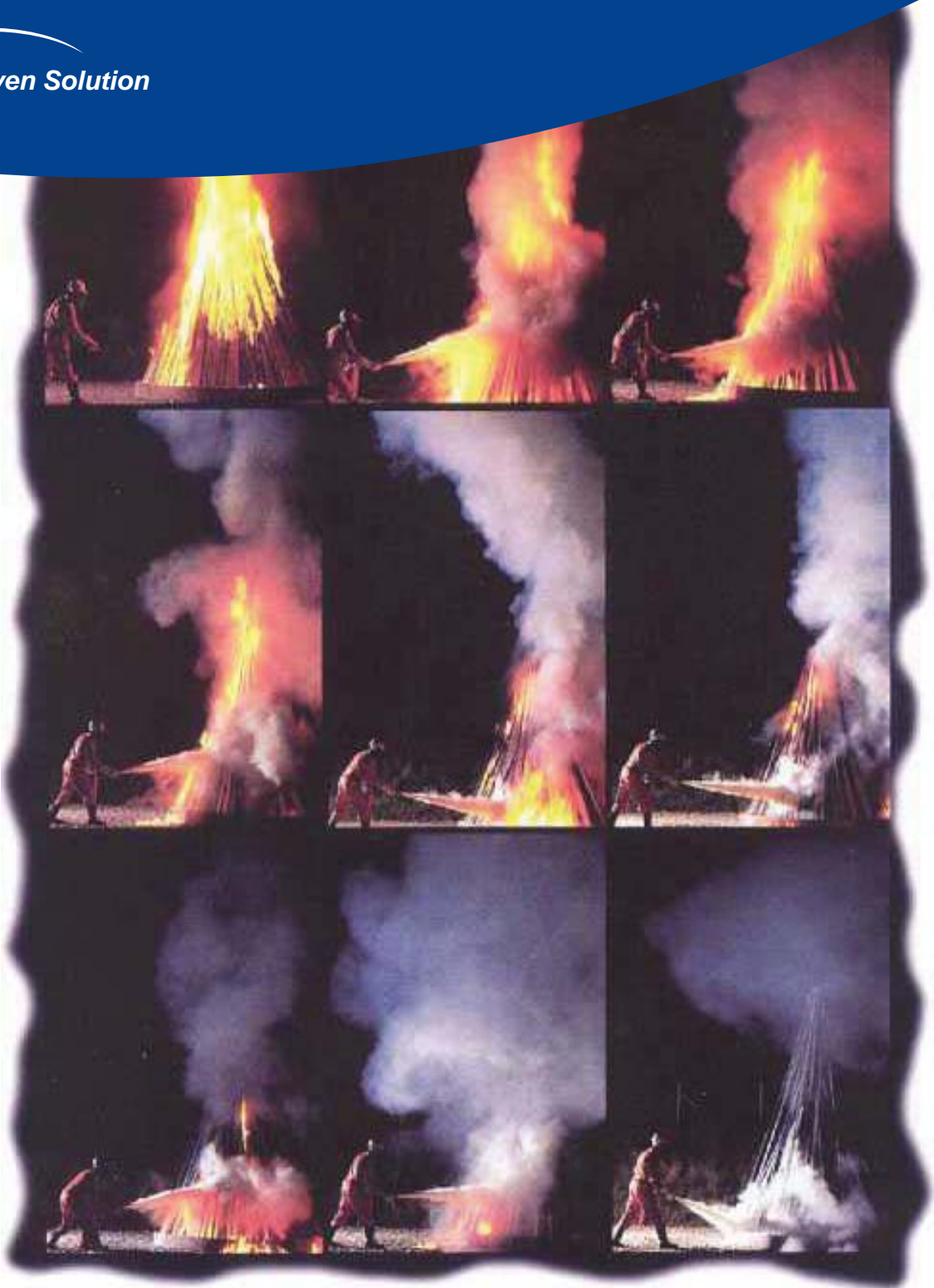


*The Proven Solution*



# Extinguishing Agents

Products with Outstanding Extinguishing Capacity



## General Information

Fire extinguishing agents have a history of more than 90 years. The first extinguishing powders were produced on a base of sodium bicarbonate. Yet they are only suitable for the fighting of burning liquids (class B) and gases (class C). In cases of fires or solid matters burning with incandescence, however, they fail. Therefore the demand was to develop a multi-purpose extinguishing powder (classes ABCD) capable of fighting as well fires in which incandescent materials are involved as liquid, gas and metal fires.

This was more necessary as practical experience showed that pure liquid or gas fires seldom occur. Mostly incandescent materials are involved. The development of these multi-purpose extinguishing powders is synonymous with the name COGNIS (formally Grunau GmbH).

The invention of the first ABCD-extinguishing powder of the world by COGNIS in the late fifties was a breakthrough which enabled fire extinguishing powders to become generally accepted and almost universally applicable extinguishing medium.

A team of scientists and experts is continuously working on further development of the existing range of products. Our proven quality products are even used for the successful fire fighting or radio-active metal fires.

Since 1995 we have emphasized our product range also to liquid agents named Pyrosal®. These products are highly effective in fighting class A and class B fires. In fire class A, these liquid extinguishing agents show an extremely high extinguishing performance. The reason for this is the combination of the cooling effect of water and the barrier layer effect which arises when Pyrosal forms a crust of salt.

In fire class B the extinguishing agent releases a thin watery film which exhibits extreme spreading properties to quickly cover the burning liquid, extinguish all flames, keep oxygen off and prevents re-ignition. In this new development the fire experts from COGNIS have continued their tradition of success: we aim to make goods products even better!

Part of our service is that we offer our customers excellent technical advice: e.g. rapid determination of the optimal extinguishing agent for every extinguisher and type of fire, by laboratory and practical tests.

Particular attention is given to continuous quality control. Each batch is tested – starting from raw material to the finished product – using the most modern physical and chemical test methods. The high standard and consistent quality of our products are the basis for our long established good partnership with our customers throughout the world.





#### Classification for Fires according to DIN EN 2

- Class A fires of solid organic materials which burn forming glowing embers
- Class B fires involving liquids or liquefiable solids
- Class C fires involving gases
- Class D fires involving metals
- Class F fires involving cooking fats and oils

#### A selection from our Product Program

Extinguishing Agent	Chemical Base	Performance	Fire Class	Remarks
Metasal 876	Ammonium phosphate	I+	A, B, C, D*	
Metasal 1617	Ammonium phosphate	II	A, B, C, D*	
Carbosal 950	Ammonium phosphate/-sulphate	III	A, B, C, D*	
Becosal K494	Potassium sulphate	II	B, C*	(highly compatible with foam)
Becosal 572	Sodium bicarbonate	II	B, C*	
Dicosal 951	Alkaline chlorides	II	D	
Pyrosal 1565	Solution of inorganic salts and different additives in water			
Pyrosal 1303	Solution of inorganic salts and different additives in water	II		
Pyrosal F	Solution of inorganic salts and different additives in water		A, B	frost resistant up to -20°C
Pyrosal F-30	Solution of inorganic salts and different additives in water		A, B	frost resistant up to -30°C
Pyrosal 1715	Solution of inorganic salts in water		A	
Pyrosal 1712	Solution of inorganic salts and different additives in water		A	frost resistant up to -20°C
Pyrosal FAT	Solution of inorganic salts in water		A, F	

#### Performance Classification

- I Top performance extinguishing agent**
- II High capacity extinguishing agent**
- III Standard extinguishing agent**
- IV Economical extinguishing agent**

In addition, many of our powders are approved for fires also in the presence of electrical voltage (1,000 to 40,000 volts). Please ask for information.

Our extinguishing agents have been tested or approved according to numerous quality standards and test specifications by many official authorities in Germany and abroad. Some examples:

Official Institute for Fire Extinguisher Agents and Extinguishers at the Regional Fire Brigade School Nordrhein-Westfalen, Munster/Germany

Scientific army Office Munster Germany

Home Secretary of Nordrhein-Westfalen, Dusseldorf/Germany

The Minister of Economy and Traffic of Nordrhein-Westfalen, Munster/Germany

Hygiene Institute of Ruhr District, Gelsenkirchen/Germany

Materials Testing Institute Dresden GmbH, Freiberg/Germany

Federal Office for Army Technique and Provision, Koblenz/Germany

Research Institute for Fire Protection Technique at the University of Karlsruhe/Germany

Materials testing Institute, Paris/France

Fire Laboratory, Champssur-Marne/France

Swiss Fire Brigades Association, Bern/Switzerland

Swiss Material Testing Institute, Dubendorf/Switzerland

Official Fire Prevention Authority, Oslo/Norway

SINTEF – The Norwegian Fire Research Laboratory, Trondheim/Norway

Mexican Institute for Standardization, Mexico



Disclaimer: The above data, particularly the recommendations for the application and use of KBS products are based on the manufacturer's knowledge and experience. Due to different materials and conditions of application, which are beyond our control, we recommend in any case to carry out sufficient tests in order to ensure that KBS products are suitable for the intended processes and applications. Therefore, any liability for such recommendations or any oral advice is expressly excluded unless we have acted wilfully or by gross negligence. It is always the responsibility of the Installer / purchaser to guarantee correct preparation, DFT (KBS Coatings) and thickness (KBS Penetration Seals) of all KBS Materials. KBS Passive Fire Pty. Ltd. is not liable for installation or faulty installation. It is always the responsibility of the installer / purchaser to guarantee and certify the installation of materials.