avantor™

VWR® for Drying & Filtration

RELIABLE SOLUTIONS FOR DRYING, FILTRATION, PURIFICATION, ABSORPTION AND ADSORPTION

VWR® BDH® CHEMICALS

Drying agents

Depending on the substances, different drying agents can be used. Gases are generally dehydrated in a dynamic process (passing the gas over or through the drying agent) in two stages. Very wet gases are at first dried with a dehydratation agent with a large drying capacity such as Mg, molecular sieves or concentrated sulphuric acid. The second stage, often to obtain fine desiccation (low water content) is achieved with P_2O_5, or molecular sieves. Solvents with low adsorption capacity of water are generally easy to dry using static desiccation with molecular sieves (100 to 200 g/l of solvent).

APPLICATION NOTE

Substance concerned: Calcium oxide and calcium chloride.

For drying: Acetone, ethers, numerous esters, aliphatic, olefinic, aromatic and halogenated hydrocarbons, neutral gases.

For drying: Acetone, ethers, numerous esters, aliphatic, olefinic, aromatic and halogenated hydrocarbons, neutral gases.

Application: Drying of liquids, filling drying tubes.

Not suitable for the drying of fast flowing gases as pore diffusion is hindered due to deliquescence during water uptake.

Capacity: 98%

Regeneration: At 250 °C in a drying oven.

CALCIUM CHLORIDE, ANHYDROUS ≥96% ACS

Description	Pack type	Pk	Cat.N°
Calcium chloride, anhydrous ≥96% ACS	Plastic bottle	500 g	1B1110-500G
		1 kg	1B1110-1KG
		2,5 kg	1B1110-2.5KG

CALCIUM CHLORIDE ≥94%, GRANULES, GPR RECTAPUR® 2-5 MM, PURIFIED

Description	Pack type	Pk	Cat.N°
Calcium chloride ≥94%, granules, GPR RECTAPUR® 2-5 mm, purified	Plastic bottle	500 g	22328.262
		5 kg	22328.364

CALCIUM CHLORIDE 90-98%, TECHNICAL

Description	Pack type	Pk	Cat.N°
Calcium chloride 90-98%, TECHNICAL	Plastic bottle	1 kg	22313.294
		5 kg	22313.363
	Bucket (plastic)	25 kg	22313.460

CALCIUM CHLORIDE, DRY ≥90%, GRANULES 2-6 MM, PURIFIED

Description	Pack type	Pk	Cat.N°
Calcium chloride, dry ≥90%, granules 2-6 mm, purified	Plastic bottle	500 g	22316.261
		5 kg	22316.363

CALCIUM OXIDE ≥92%, POWDER, TECHNICAL

Description	Pack type	Pk	Cat. No.
Calcium oxide ≥92%, powder, TECHNICAL	Plastic bottle	500 g	22645.260
	Bucket (plastic)	5 kg	22645.360

APPLICATION NOTE

Substance concerned : calcium sulphate/ Drierite®

For drying: Almost all liquids and gazes

Application: Particularly suitable for the desiccation of gases in which small quantities of organic compounds have to be analysed, as these are practically not absorbed by CaSO4.1/2 H2O.

No dehydrating effect above 80°C

Regenaration: Between 190-230°C in the oven. Above 300°C, the calcium sulphate is calcinated and can't dry

CALCIUM SULPHATE, DRIERITE™ 3 MM (8 MESH) FOR DRYING, WITH INDICATOR (COBALT (II) CHLORIDE)

Description	Pack type	Pk	Cat.N°
Calcium sulphate, Drierite™ 3 mm (8 mesh) for drying, with indicator (cobalt (II) chloride)	Plastic bottle	454 g	279774H

CALCIUM SULPHATE HEMIHYDRATE, TECHNICAL

Description	Pack type	Pk	Cat.N°
Calcium sulphate hemihydrate, TECHNICAL	Plastic bottle	1 kg	22441.296

APPLICATION NOTE

Substance concerned: Copper(II) sulphate, anhydrous.

For drying: Low fatty acids, alcohols and ethers.

Unsuitable for drying: Amines, nitriles ans, ammonia.

Regeneration: Above 50 °C under vacuum.

Advantage: Can be used as indicator: Colourless anhydrous copper(II) sulphate becomes blue as copper(II) sulphate 5-hydrate.

COPPER(II) SULPHATE, ANHYDROUS ≥97%, TECHNICAL

Description	Pack type	Pk	Cat. No.
Copper(II) sulphate, anhydrous ≥97%, TECHNICAL	Plastic bottle for solids	500 g	23168.265

APPLICATION NOTE

Substance concerned: Magnesium oxide.

For drying: Alcohols, hydrocarbons, basic liquids.

Unsuitable for drying: Acid compounds.

Regeneration: At 800 °C.

MAGNESIUM OXIDE LIGHT 98.0-100.5%, ANALAR NORMAPUR® ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Magnesium oxide light 98.0-100.5%, AnalaR® NORMAPUR® analytical reagent	Plastic bottle for solids	50 g	25061.156
		250 g	25061.236

APPLICATION NOTE

Substance concerned: Magnesium sulphate, dried.

For drying: Almost all compounds including acids, acid derivatives, aldehydes, esters, nitriles and ketones.

Regeneration: at 200 °C in a drying oven.

MAGNESIUM SULPHATE, DRIED ≥98%, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
Magnesium sulphate, dried ≥98%, GPR RECTAPUR®	Plastic bottle for solids	500 g	291184P
		2.5 kg	291186R
	Bucket (plastic)	25 kg	29118BW

APPLICATION NOTE

Substance concerned: Magnesium sulphate.

For drying: Almost all compounds including acids, acid derivatives, aldehydes, esters, nitriles and ketones.

Regeneration: At 200 °C in a drying oven.

MAGNESIUM SULPHATE ≥95%, TECHNICAL

Description	Pack type	Pk	Cat. No.
Magnesium sulphate ≥95%, TECHNICAL	Bucket (plastic)	5 kg	25162.361
		25 kg	25162.465

APPLICATION NOTE

Substance concerned: Diphosphorus pentoxide.

For drying: Neutral and acid gases, saturated alipathic and aromatic hydrocarbons, nitriles, alkyl and aryl halogenides and carbon disulphide.

Unsuitable for drying: Alcohols, amines, acids, ketones, ethers, chlorinated and fluorinated hydrocarbons.

Capacity: P2O5: 40% Sicapent®: 33%.

Application note: On adsorbing water, phosphorus pentoxide becomes covered with a film of polymetaphosphoric acid which hinders the diffusion of H_2O molecules. This effect can be avoided by using Sicapent® as the polymetaphosphoric acid formed from P2O5 and water is immediately adsorbed by the carrier substance. As a result, the drying agent is available as a fine, flowable granulate.

Regeneration: Not possible.

DIPHOSPHORUS PENTOXIDE ≥98.0%, ANALAR NORMAPUR® ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Diphosphorus pentoxide ≥98.0%, AnalaR® NORMAPUR® analytical reagent	Plastic bottle for solids	250 g	**21411.230**
		1 kg	**21411.296**

DIPHOSPHORUS PENTOXIDE ≥98.0%, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
Diphosphorus pentoxide ≥98.0%, GPR RECTAPUR®	Plastic bottle for solids	1 kg	**21410.293**

APPLICATION NOTE

Substance concerned: Potassium carbonate.

For drying: Ammonia, amines, acetone, nitriles and chlorinated hydrocarbons.

Unsuitable for drying: Acids, substances that tend to react when exposed to water-removing basic conditions.

Application: Drying liquids.

Regeneration: At 160 °C; becomes finely powdered from 100 °C.

Unsuitable for drying: Acid compounds.

POTASSIUM CARBONATE ≥99.0%, ANALAR NORMAPUR® ANALYTICAL REAGENT, SODIUM-FREE

Description	Pack type	Pk	Cat. No.
Potassium carbonate ≥99.0%, AnalaR® NORMAPUR® analytical reagent, sodium-free	Plastic bottle for solids	500 g	**26727.267**

APPLICATION NOTE

Substance concerned: Potassium hydroxide.

For drying: Basic liquids, e.g, amines plus inert and basic gases.

Unsuitable for drying: Acids and acid derivatives (chlorides, anhydrides, amides and nitriles).

Application: Drying liquids.

Not suitable for drying fast flowing gases as this hinders diffusion due to deliquescence. Can be used for drying gases if, apart from moisture, acid gas should be adsorbed.

POTASSIUM HYDROXIDE 85,0-100,5%, PELLETS, ANALAR NORMAPUR® REAG. PH. EUR. ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Potassium hydroxide 85.0-100.5%, pellets, AnalaR® NORMAPUR® Reag. Ph. Eur. analytical reagent	Plastic bottle for solids	500 g	**26668.263**
		1 kg	**26668.296**
		5 kg	**26668.365**
	Bucket (plastic)	25 kg	**26668.460**

APPLICATION NOTE

Substance concerned: Sodium hydroxide.

For drying: Basic liquids, e.g., amines also inert and basic gases.

Unsuitable for drying: Acids and acid derivatives (chlorides, anhydrides, amides and nitriles).

Application: Drying liquids. Not suitable for drying fast-flowing gases as pore diffusion is hindered by deliquescence. Can be used for drying gases if acid gas also has to be adsorbed.

SODIUM HYDROXIDE 98.5-100.5%, PELLETS, ANALAR NORMAPUR® REAG. PH. EUR. ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Sodium hydroxide 98.5-100.5%, pellets, AnalaR® NORMAPUR® Reag. Ph. Eur. analytical reagent	Plastic bottle for solids	500 g	**28244.262**
		1 kg	**28244.295**
		5 kg	**28244.364**
	Bucket (plastic)	25 kg	**28244.466**

APPLICATION NOTE

Substance concerned: Sodium sulphate.

For drying: Almost all compounds including fatty acids, aldehydes, ketones and alkyl also aryl halogenides.

Application: Drying liquids; of average effect.

Regeneration: At 150 °C in a drying oven.

SODIUM SULPHATE ≥99.5%, PESTINORM® FOR PESTICIDE RESIDUE ANALYSIS

Description	Pack type	Pk	Cat. No.
Sodium sulphate ≥99.5%, PESTINORM® for pesticide residue analysis	Glass bottle for solids	1 kg	28116.293

SODIUM SULPHATE, ANHYDROUS 98,5-101,0%, ANALAR NORMAPUR® REAG. PH. EUR. ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Sodium sulphate, anhydrous 98.5-101.0%, AnalaR® NORMAPUR® Reag. Ph. Eur. analytical reagent	Plastic bottle for solids	250 g	28114.230
		500 g	28114.260
		1 kg	28114.296
		5 kg	28114.365
	Bucket (plastic)	25 kg	28114.460

SODIUM SULPHATE ≥99%, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
Sodium sulphate ≥99%, GPR RECTAPUR®	Plastic bottle for solids	500 g	28111.260
		1 kg	28111.296
		5 kg	28111.365

APPLICATION NOTE

Substance concerned: Sulphuric acid.

For drying: Air, gases such as hydrogen chloride, chlorine, carbon monoxide,sulphur dioxide, hydrocarbons and inert gases.

Unsuitable for drying: oxidising gases such as hydrogen sulphides and hydrogen iodides also unsaturated and numerous other organic compounds.

Application: Sulphuric acid is used in wash bottles for drying gases.

SULPHURIC ACID 95.0-97.0%, ANALAR NORMAPUR® ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Sulphuric acid 95.0-97.0%, AnalaR® NORMAPUR® analytical reagent	Glass bottle	500 ml	20700.265
	Plastic bottle	1 L	20700.290
	Safebreak bottle	1 L	20700.243
	Glass bottle	1 L	20700.298
	Plastic bottle	2.5 L	20700.320
	Safebreak bottle	2.5 L	20700.323
	Glass bottle	2.5 L	20700.420
	Plastic jerrycan	25 L	20700.460

SULPHURIC ACID 95-97%, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
Sulphuric acid 95-97%, GPR RECTAPUR®	Plastic bottle	1 L	20690.290
		2,5 L	20690.330
	Plastic jerrycan	20 L	20690.442

Silica Gels for Dessicators

Dessicators are mostly used to dry solids and chemicals which have hygroscopic properties. Our wide range of Silica gels with or without indicators can be used in dessicators protecting moisture-sensitive substances during storage and transport, maintaining dryness of anhydrous solvents.

SILICA GELS WITH MOISTURE INDICATOR

SILICA GEL, GRANULES, CHAMELEON® C 2,5 - 6 MM DRYING AGENT

Non toxic dessicants, for adsorbing moisture from the atmosphere and gas streams, which contain iron salts as a colour indicator. The dry material has an intense orange colour and changes to a pale beige/white on adsorption of water.

- Water adsorption capacity at 50% RH is a minimum of 23%
- Loss on drying at 145 °C is less than 2%
- At concentration of 10% in water, pH is from 1,5 to 5
- Regeneration can be achieved by heating to 150 °C in a drying oven

Description	Pack type	Pk	Cat. No.
Silica gel, granules, Chameleon® C 2,5 - 6 mm drying agent	Plastic bottle for solids	1 kg	**83000.290**
	Bucket (plastic)	5 kg	**83000.360**
		25 kg	**83000.460**

SILICA GEL, GRANULES, CHAMELEON® C 1 - 3 MM DRYING AGENT

Non toxic dessicants, for adsorbing moisture from the atmosphere and gas streams, which contain iron salts as a colour indicator. The dry material has an intense orange colour and changes to a pale beige/white on adsorption of water.

- Water adsorption capacity at 50% RH is a minimum of 23%
- Loss on drying at 145 °C is less than 2%
- At concentration of 10% in water, pH is from 1,5 to 5
- Regeneration can be achieved by heating to 150 °C in a drying oven

Description	Pack type	Pk	Cat. No.
Silica gel, granules, Chameleon® C 1 - 3 mm drying agent	Plastic bottle for solids	500 g	**83001.260**
	Plastic bottle for solids	1 kg	**83001.290**
	Bucket (plastic)	5 kg	**83001.360**
		25 kg	**83001.460**

SILICA GEL, GRANULES, CHAMELEON® C 2 - 6 MM DRYING AGENT IN SACHETS

This product adsorbs water vapour, so maintaining a dry environment for your products. When the gel's adsorption capacity is exhausted the colour changes from orange to colourless. The product can be regenerated back to an orange by heating in a drying oven at 120 to 140 °C for approximately 3 hours and then re-used. It is suitable for numerous drying applications, although it is not recommended for strongly acidic or strongly alkaline compounds.

Description	Pack type	Packed	Pk	Cat. No.
Silica gel, granules, Chameleon® C 2 - 6 mm drying agent in sachets	Sachets	100x5g	100	**87185.0500**
		500x5 g	500	**87185.2500**

SILICA GEL, BLUE, PEARLS, GPR RECTAPUR® 2-4 MM, WITH INDICATOR

This silica gel blue is used where products need to be protected from humidity during storage and transportation. Our Silica gel blue changes ist color from dark blue to pink when saturated.

- Free of Cobalt(II)chloride
- Regeneration is possible at 120°C for 4 hours
- Colour change from dark blue to pink

Description	Pack type	Pk	Art. N°
Silica gel, blue, pearls, GPR RECTAPUR® 2-4 mm, with indicator	Plastic bottle	1 kg	**89050.292**
		5 kg	**89050.360**

SILICA GEL, YELLOW/BLUE, FRACTURED, GPR RECTAPUR® 2.5-5 MM, WITH INDICATOR

Our silica gel yellow/blue is used where products need to be protected from humidity during storage and transportation. The colour changes from yellow to light blue when saturated.

- Mixture of various indicators and free of dangerous materials
- Colour change from yellow to light blue
- Regeneration at 120 °C for 4 h

Description	Pack type	Pk	Art. N°
Silica gel, yellow/blue, fractured, GPR RECTAPUR® 2.5-5 mm, with indicator	Plastic bottle	1 kg	**89051.292**
	Plastic bottle	5 kg	**89051.360**

SILICA GEL, ORANGE/GREEN, BEADS, GPR RECTAPUR® 2,5-5 MM, WITH INDICATOR

Our silica gel orange/green is used where products need to be protected from humidity during storage and transportation. The colour changes from orange to dark green when saturated.

- Mixture of various indicators and free of dangerous materials
- Colour change from orange to dark green
- Regeneration at 120 °C for 4 h

Description	Pack type	Pk	Art. N°
Silica gel, orange/green, beads, GPR RECTAPUR® 2,5-5 mm, with indicator	Plastic bottle	1 kg	**89054.292**
	Plastic bottle	5 kg	**89054.360**

SILICA GEL, RED/YELLOW, BEADS, GPR RECTAPUR® 3-6 MM, WITH INDICATOR

Our silica gel red/yellow is used where products need to be protected from humidity during storage and transportation. The colour changes from ruby red to orange-yellow when saturated.

- Mixture of various indicators and free of dangerous materials
- Colour change from ruby red to orange-yellow
- Regeneration at 120 °C for 4 hours

Description	Pack type	Pk	Art. N°
Silica gel, red/yellow, beads, GPR RECTAPUR® 3-6 mm, with indicator	Plastic bottle	1 kg	**89053.292**
	Plastic bottle	5 kg	**89053.360**

SILICA GELS WITHOUT MOISTURE INDICATOR

SILICA GEL, GPR RECTAPUR® 0.2-2.0 MM

Glassy, hard, irregular shaped granules with a very high purity of SiO_2 and an internal surface of approx. 800 m^2/g. Because of its very large surface area, this silica gel exhibits a high adsorption for water vapour.

- Can be reactivated without significantly impairing the efficiency
- Very economical
- Easy to dispose

Description	Pack type	Pk	Art. N°
Silica gel, GPR RECTAPUR® 0.2-2.0 mm	Plastic bottle	1 kg	**27616.292**
	Plastic bottle	5 kg	**27616.360**

SILICA GEL, WHITE, SMALL PORED BEADS 2.5-4 MM

Glassy, hard beads with an internal surface of approx. 800m2/g. Because of its very large surface area our beads exhibit a high adsorption capacity for water vapour. The beads can be reactivated without significantly reducing the adsorption efficiency.

- Very economical
- Easy to dispose of
- Without any known adverse effects on the environment

Description	Pack type	Pk	Art. N°
Silica gel, white, small pored beads 2.5-4 mm	Plastic bottle	1 kg	**27612.292**

SILICA GEL, ULTRAFINE POWDER, GPR RECTAPUR®

Description	Pack type	Pk	Art. N°
Silica gel, ultrafine powder, GPR RECTAPUR®	Plastic bottle	1 kg	**24976.290**

SILICA GEL, GRANULES, 3-6 MM TECHNICAL

Description	Pack type	Pk	Art. N°
Silica gel, granules, TECHNICAL	Plastic bottle	1 kg	**27613.294**

Molecular sieves

A molecular sieve is a highly porous crystalline material with precise mono-dispersed pores into which certain sizes of molecules can fit, and thus, can be used to separate one type of molecule from others. The pore sizes of molecular sieves differ from silica gel, in that the pore size of a molecular sieve is small and precise, while that of silica gel is much larger with a broad distribution. Molecular sieves are available with different effective pore sizes, such as 3, 4, 5, and 10 Å. A molecular sieve with a 3 Å effective pore size can selectively adsorb water molecules, since the diameter of water molecule is approximately 3 Å, while a molecular sieve with 4 Å pore size can also adsorb nitrogen and oxygen, in addition to water.

APPLICATION NOTE

Advantages

- Easy to use: Practically chemically inert, non toxic, no disposal problems, dried liquids can be decanted
- High adsorption capacity even with low water content of the substance to be dried
- High adsorption capacity even at high temperatures.
- High adsorption affinity for polar and unsaturated organic molecules; however, H_2O is always preferentially adsorbed
- Selective adsorption: Only molecules that can pass through the pores are adsorbed

MOLECULAR SIEVE 3A (0.3 NM, 3 Å), RODS, GPR RECTAPUR®, Ø ~1.6 MM

Description	Pack type	Pk	Art. N°
Molecular sieve 3A (0.3 nm, 3 Å), RODS, GPR RECTAPUR®, Ø ~1.6 mm	Plastic bottle	250 g	28461.230
		1 kg	28461.292

MOLECULAR SIEVE 3A (0.3 NM, 3 Å), BEADS, GPR RECTAPUR®, Ø 1.6 - 2.5 MM

Description	Pack type	Pk	Art. N°
Molecular sieve 3A (0.3 nm, 3 Å), beads, GPR RECTAPUR®, Ø 1.6 - 2.5 mm	Plastic bottle	250 g	28468.230
		1 kg	28468.292

MOLECULAR SIEVE 4A (0.4 NM, 4 Å) 1.6 MM, BEADS, GPR RECTAPUR®

Description	Pack type	Pk	Art. N°
Molecular sieve 4A (0.4 nm, 4 Å) 1.6 mm, beads, GPR RECTAPUR®	Plastic bottle	250 g	28466.230
		1 kg	28466.292

MOLECULAR SIEVE 13X (1.0 NM, 10 Å), BEADS, GPR RECTAPUR®

Description	Pack type	Pk	Art. N°
Molecular sieve 13X (1.0 nm, 10 Å), beads, GPR RECTAPUR® ~2 mm	Plastic bottle	250 g	28462.230
		1 kg	28462.290

Reagents for filtration and clarification

For the clarification, discoloration and removal of some sustances from colloidal solutions, it is recommended that you use a range of media with high porosity including activated charcoal, Glasswool, graphite powder, sands and synthetic fibres or membranes. Pore size can also adsorb nitrogen and oxygen, in addition to water.

ALUMINIUM OXIDE, TECHNICAL, CALCINED

Description	Pack type	Pk	Cat. No.
Aluminium oxide, TECHNICAL, calcined	Bucket (plastic)	5 kg	20985.361
		25 kg	20985.460

CHARCOAL ACTIVATED

CHARCOAL ACTIVATED, ANALAR NORMAPUR® ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Charcoal activated, AnalaR NORMAPUR®	Plastic bottle for solids	250 g	**87126.230**

CHARCOAL ACTIVATED, GPR RECTAPUR® FOR GAS ADSORPTION

Description	Pack type	Pk	Art.N°
Charcoal activated, GPR RECTAPUR® for gas adsorption	Plastic bottle	1 kg	**84147.293**
		5 kg	**84147.362**

CHARCOAL ACTIVATED (VEGETABLE BASED), POWDER, GPR RECTAPUR®

Description	Pack type	Pk	Art.N°
Charcoal activated (vegetable based), powder, GPR RECTAPUR®	Plastic bottle	1 kg	**22637.293**
		10 kg	**22637.415**

GLASS WOOL

GLASS WOOL, SUPERFINE (~11 MM), ANALAR NORMAPUR®

Glass wool is often used as filter material in analytical processes and as supporting substance for drying agents in drying towers (e.g. to prevent "caking" in P2O5).

- Chemical resistance even against strong acids (except HF)

Other applications are based on its thermal resistance and its very good insulation properties (up to ~500 °C).

Description	Pack type	Pk	Art.N°
Glass wool, Superfine (~11 µm), AnalaR NORMAPUR®	Plastic bottle	30 g	**85774.140**
		100 g	**85774.180**
		1 kg	**85774.290**

SILICA WOOL (~ 9 MICRONS) TECHNICAL, VWR®

Our silica wool is made from pure fused quartz fiber: amorphous, continuous, tangled, white, odorless, with no volatile component and no shot. Length, shape and arrangement of fibers give the wool its curly appearance preventing compression of the padding and improves its desired insulating properties.

- High temperature use
- Resistance to thermal shocks
- Low thermal conductivity
- High electrical resistivity
- Low dielectric constant
- Good chemical resistance

Description	Pack type	Pk	Art.N°
Silica wool (~ 9 microns) TECHNICAL, VWR®	Plastic bottle	50 g	**24950.152**

GRAPHITE POWDER

GRAPHITE, POWDER, TECHNICAL

Description	Pack type	Pk	Art.N°
Graphite, powder, TECHNICAL	Plastic bag	5 kg	**24489.363**

SANDS

Sand is used usually in laboratories to filter and clarify highly contaminated water or solutions. Sand filtration is used for the removal of suspended matter, as well as floating and sinkable particles. The water or solution flow vertically through a fine bed of sand. Particles are removed by way of absorption or physical encapsulation.

SAND FONTAINEBLEAU, TECHNICAL

Description	Pack type	Pk	Cat. No.
Sand Fontainebleau, TECHNICAL	Plastic bottle	1 kg	**27460.295**
	Bucket (plastic)	5 kg	**27460.364**
	Bucket (plastic)	25 kg	**27460.460**

SAND (SEA SAND), GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
Sand (sea sand), GPR RECTAPUR®	Plastic container	1 kg	**86154.295**
	Plastic drum	5 kg	**86154.364**
	Plastic container	25 kg	**86154.460**

SAND (SEA SAND), ANALAR® NORMAPUR® ANALYTICAL REAGENT, PURIFIED BY ACID, CALCINATED

Description	Pk	Cat. No.
Sand (sea sand), AnalaR® NORMAPUR® analytical reagent, purified by acid, calcinated	1 kg	**86152.290**
	5 kg	**86152.360**
	25 kg	**86152.460**

SAND, TECHNICAL, INDUSTRIAL, WASHED

Description	Pack type	Pk	Art.N°
Sand, TECHNICAL, industrial, washed	Plastic bottle	**1 kg**	**27461.298**
		5 kg	**27461.360**
	Bucket (plastic)	**25 kg**	**27461.460**

SODA LIME

This reagent is used to absorb CO_2 from air and gazes, offering a large internal surface area for this purpose. It's really suitable for small or large absorption systems in laboratories and technical facilities.

SODA LIME, ANALAR NORMAPUR® ANALYTICAL REAGENT, WITH INDICATOR

Description	Pack type	Pk	Art.N°
Soda lime, AnalaR NORMAPUR® analytical reagent, with indicator	Plastic bottle	1 kg	**22666.293**
	Bucket	5 kg	**22666.362**

Filter aids

We can offer different diatomaceous earth grades, with permeabilities to meet virtually every filtration requirement in sample preparation applications.

CELITE® - SILICATE BASIS

Diatomaceous earth is made up of natural amorphous silica formed from the fossilized skeletons of diatoms. It is extracted, crushed, dried and calcined with flux material. This product is widely used in many applications as filler in construction materials, paints and as an anti-caking agent for agricultural chemicals. It has high water and oil absorption ability.

These filter aids, flux calcined diatomite, described below can be easily used as a filtering aid or as adsorbent in column chromatography.

Composition
Approx 90% SiO2, 2-5% Al2O3, 1-4% Fe2O3 and various other oxydes in a low concentration. This is the reason why the CELITE® can be slightly tinted.

Description	250 g	1 kg	5 kg	25 kg
Celite® 503, filter aid, GPR RECTAPUR®		**22553.290**	**22553.360**	
Celite® 535, filter aid, GPR RECTAPUR®		**22554.290**	**22554.360**	
Celite® 545, filter aid, GPR RECTAPUR®	**22557.230**	**22557.290**	**22557.360**	**22557.460**
Celite® Hyflo Super-cel®, filter aid, GPR RECTAPUR®		**22559.290**	**22559.360**	
Celite® 512, medium filter aid, GPR RECTAPUR®		**22555.290**	**22555.360**	**22555.460**
Celite® Standard Super-cel®, filter aid, GPR RECTAPUR®		**22556.290**	**22556.360**	

PERLITE FOR HIGH CLARITY FILTRATION

Perlite is a material that looks like granules or powder and is white in colour. It is a volcanic silica sand containing water that is industrially expanded by heat treatment (1200 °C). It is composed of silica, alumina, iron oxide, titanium oxide, lime, magnesia, sodium oxide and potassium. It has a very high water retention capacity (4 to 5 times its weight) and is pH neutral (from 7 to 7,2).

- **Due to its exceptional physical properties, it has a variety of applications:**

Horticultural

Can be used as a component of soil-less growing mixes where it provides aeration and optimum moisture retention for superior plant growth.

Industrial

Perlite are the most diverse, ranging from high performance fillers for plastics to cement for petroleum, water and geothermal wells.

Filtration

Lightweight expanded perlite bubble structures are produced specially to create perlite filter aids with specific flow characteristics. In the perlite structure, this process generates billions of microscopic channels between the filter aid particles, to produce optimum flow rates and clarification abilities for a wide variety of applications.

Melting point	>1093 °C
Density	>2,2 <2,4 g/cm³
pH (10%)	6,5 – 7,5
Specific gravity	1,9 – 2,5
Particle size (>50 µm)	Max. 25%

Description	Pack type	Pk	Art.N°
Perlite for high clarity filtration	Bucket (plastic)	1 kg	**84101.290**
		5 kg	**84101.360**

KIESELGUHR

In the chemical industry, this product is used as a filter to clarify syrups and sugar and as a filling material in paper, paints, ceramics, soap and detergents.

Description	Pack type	Pk	Art.N°
Kieselguhr, AnalaR NORMAPUR®, purified and calcined	Bucket (plastic)	1 kg	**89056.290**

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