



Minerals & Phosphate

Available at Albader Trading Group Corp

# Minerals Available;

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- Phosphate Natural
- Acide Phosphoric Marchand
- DAP ( Di, Ammonia Phosphate)
- MAP ( Mono Ammonia Phosphate)
- TSP ( Tripple Supper Phosphate)
- SSP ( Simple Super Phosphate)
- DCP ( DI Calcium Phosphate)
- Ammortiate Agricole

## — PHOSPHATE MINÉRAL

### ∨ PHOSPHATE NATUREL POUR L'APPLICATION DIRECTE

#### Chemical Analysis on Dry Matter

Specifications		Typical %	Micronutrients		Typical %
Phosphorus Pentoxide	P <sub>2</sub> O <sub>5</sub>	28 - 29	Chlorine Zinc	Cl Zn	900 ppm 370 ppm
Sulfur Trioxide	SO <sub>3</sub>	3 - 4	Manganese	Mn	30 ppm
Carbon Dioxide	CO <sub>2</sub>	6.0 - 7.0	Cobalt	Co	20 ppm
Total Silica	SiO <sub>2</sub>	2.5 - 3.6	Copper	Cu	19 ppm
Calcium oxide	CaO	48 - 50	Molybdenum	Mo	50 ppm
Magnesium oxide	MgO	0.6 - 0.7			
Iron Oxide	Fe <sub>2</sub> O <sub>3</sub>	0.3 - 0.4			
Aluminium Oxide	Al <sub>2</sub> O <sub>3</sub>	0.4 - 0.6			
Sodium Oxide	Na <sub>2</sub> O	1.2 - 1.4			
Potassium Oxide	K <sub>2</sub> O	0.10 - 0.14			
Fluorine	F	3.0			
Organic Carbon		1.0			
Moisture (H <sub>2</sub> O)		3.0 max			



## Screen Analysis

Undersize	wt % minimum
Mesh, Tyler 32 (0.500 mm)	90
Mesh, Tyler 60 (0.250 mm)	75
Mesh, Tyler 80 (0.180 mm)	60
Mesh, Tyler 100 (0.150 mm)	50

## Solubility

Method	% of Total P <sub>2</sub> O <sub>5</sub>	% of Rock
<b>Ammonium Citrate (AOAC)</b>		
Neutral Ammonium Citrate - 2nd extraction	28 - 30	8 - 9
Ammonium Citrate pH <sub>3</sub>	73 - 75	22 - 25
<b>2% Citric Acid</b>		
European Union	40 - 45	12 - 14
Others (as received unground rock)	30 - 32	10 - 11
<b>2% Formic Acid</b>		
European Union	70 - 77	21 - 24
Others (as received unground rock)	54 - 58	16 - 18



Designation	Element	Concentration
Specifications in % on Dry Basis Chemical Analysis		
Phosphorus Pentoxide	P <sub>2</sub> O <sub>5</sub>	29-30%
Sulfur Trioxide	SO <sub>3</sub>	3-4%
Carbone dioxide	CO <sub>2</sub>	6,0%
Total silica	SiO <sub>2</sub>	2,5-3,5%
Calcium oxide	CaO	48-49%
Magnesium	MgO	0,45-0,70%
Iron oxide	Fe <sub>2</sub> O <sub>3</sub>	0,2-0,3%
Aluminium oxide	Al <sub>2</sub> O <sub>3</sub>	0,4-0,6
Sodium oxide	Na <sub>2</sub> O	1,3%
Potassium oxide	K <sub>2</sub> O	0,04-0,10%
Fluorine	F	3,0-3,5%
Organic carbon	CO	0,5-0,8%
Moisture in % on natural state		Max : 3%



✓ PHOSPHATE NATUREL POUR LA TRANSFORMATION CHIMIQUE

Designation	Element	Concentration
Specifications in % on Dry Basis Chemical Analysis		
Phosphorus Pentoxide	P <sub>2</sub> O <sub>5</sub>	29-30%
Sulfur Trioxide	SO <sub>3</sub>	3-4%
Carbone dioxide	CO <sub>2</sub>	6,0%
Total silica	SiO <sub>2</sub>	2,5-3,5%
Calcium oxide	CaO	48-49%
Magnesium	MgO	0,45-0,70%
Iron oxide	Fe <sub>2</sub> O <sub>3</sub>	0,2-0,3%
Aluminium oxide	Al <sub>2</sub> O <sub>3</sub>	0,4-0,6
Sodium oxide	Na <sub>2</sub> O	1,3%
Potassium oxide	K <sub>2</sub> O	0,04-0,10%
Fluorine	F	3,0-3,5%
Organic carbon	CO	0,5-0,8%
Moisture in % on natural state		Max : 3%



## Ratios

$(\text{CaO} - 0,7\text{SO}_3) / \text{P}_2\text{O}_5$	1,57
$(\text{Fe}_2\text{O}_3 + \text{Al}_2\text{O}_3 + \text{MgO}) / \text{P}_2\text{O}_5$	0,045-0,050

## Solubility

Analysis CEF method	
Solubility in formic acid 2%	70-80%
Solubility in citric acid 2%	40-45%

## Screen Analysis

Mesh in microns	In mesh (Tyler)	% by weight
> 500	> 32	10-20%
< 250	< 60	70-80%



✓ ACIDE PHOSPHORIQUE MARCHAND

Designation	Element	Concentration
Phosphorus Pentoxide	$P_2O_5$	52-56%
Calcium Oxide	CaO	0,5% max
Sulfuric Acid	$H_2SO_4$	2,5% max
Iron Oxide	$Fe_2O_3$	1% max
Aluminium Oxide	$Al_2O_3$	0,5% max
Magnesium Oxide	MgO	0,9-1,4%
Fluorine	F	0,25-0,4%
Carbon	C	0,04% max
Specific Gravity	g/cm <sup>3</sup>	1,7%





## — ENGRAIS

### ∨ DAP (DI-AMMONIUM PHOSPHATE)

#### Chemical Analysis

Total Nitrogen		min 18%
Total P <sub>2</sub> O <sub>5</sub>		min 46%
Water / citrate-soluble	P <sub>2</sub> O <sub>5</sub>	min 46%
Water-soluble	P <sub>2</sub> O <sub>5</sub>	min 43%
Moisture		max 1,7%

#### Screen Analysis

% by weight between 1 and 4 mm	min 95%
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✓ MAP (MONO AMMONIUM PHOSPHATE)

Designation	Element	Concentration
Total Nitrogen	N	11% min
Phosphorus	P <sub>2</sub> O <sub>5</sub> (T)	52% min
Pentoxide		
Water/Citrate-Soluble	P <sub>2</sub> O <sub>5</sub> (SE+C)	52% min
Water Soluble	P <sub>2</sub> O <sub>5</sub> (SE)	49% min
Moisture	H <sub>2</sub> O	1,7% max
Screen Analysis : % by weight 1-4 mm		95% min



✓ TSP (TRIPLE SUPER PHOSPHATE)

Designation	Element	Concentration
Phosphorus Pentoxide	$P_2O_5$ (T)	47% min
Water/Citrate-Soluble	$P_2O_5$ (SE+C)	46% min
Water Soluble	$P_2O_5$ (SE)	43% min
Moisture	$H_2O$	4% max
Free Acid	$P_2O_5$	4% max
Screen Analysis :% by weight 1-5 mm		94% min



▼ SSP (SIMPLE SUPER PHOSPHATE)

**Chemical Analysis**

P <sub>2</sub> O <sub>5</sub>	Total	22% min
P <sub>2</sub> O <sub>5</sub>	Water/Citrate Soluble	20% min
P <sub>2</sub> O <sub>5</sub>	Water Soluble	17% min
Ca	Calcium	21% min
S	Sulfur	10% min
H <sub>2</sub> O	Moisture	5% max
P <sub>2</sub> O <sub>5</sub>	Freea acide	1% max
<b>Micronutrients</b>		
Zn	Zine	160 - 200 ppm
Cu	Copper	5 - 10 ppm
Mn	Manganese	15 - 20 ppm
Mo	Molybdenum	4 - 5 ppm
<b>Heavy Metal</b>		
Cd	Cadmium	20 - 30 ppm
As	Arsenie	< 1 ppm
Hg	Mercure	< 1 ppm
Pb	Lead	< 1 ppm



## DCP (DI-CALCIUM PHOSPHATE)



Designation	Element	Concentration
Phosphorus	P	17,5% min
Calcium	Ca	22% min
Fluorine	F	0,2% max
Moisture	H <sub>2</sub> O	3% max
Lead	Pb	10 ppm max
Arsenic	As	5 ppm max
Cadmium	Cd	10 ppm max
Mercury	Hg	0,1ppm max
Insoluble Hydrogen Chloride	HCl	0,9% max
Soluble Citrate		98% min
Screen Analysis : % by weight <1 mm		90% min

✓ AMMONITRATE AGRICOLE



Designation	Element	Concentration
Total Nitrogen	N	33,5% min
Ammonia Nitrogen	16,75% min Nnitrogen	
Nitric Nitrogen	Nnitric	16,75% min
Moisture	H <sub>2</sub> O	0,3% max
Screen Analysis : % by weight 1-4 mm		95% min

