

### **MIDGARD GROUP UAE**

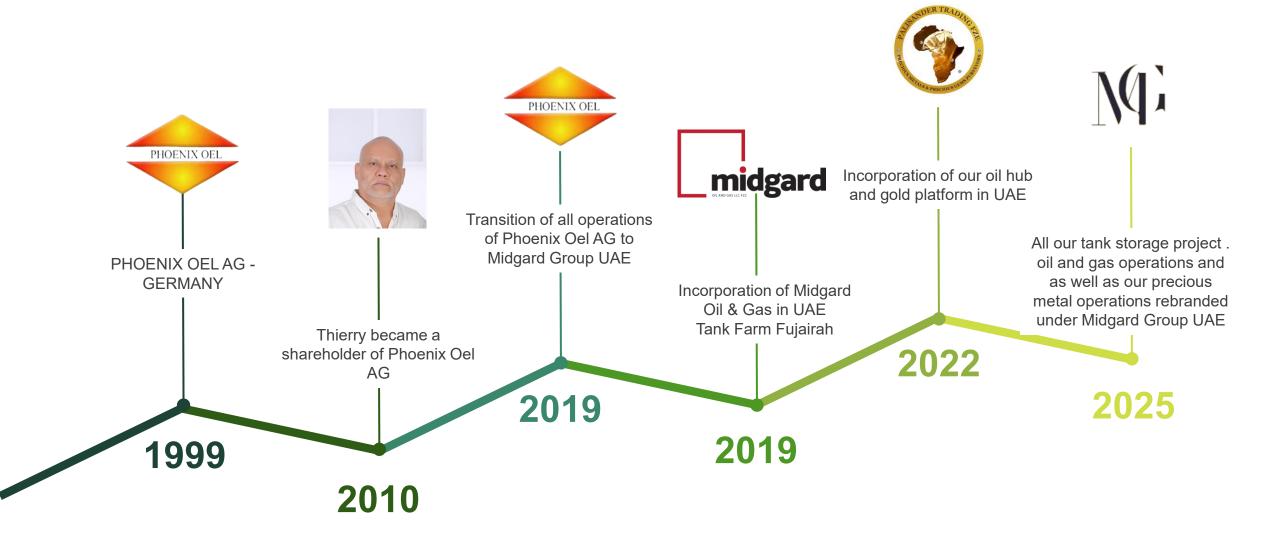




**AGE PTY LTD** 



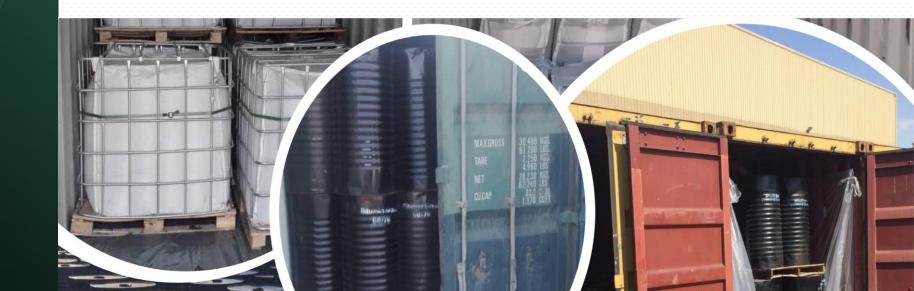
### ABOUT MIDGARD GROUP UAE



### BITUMEN

# **BITUMEN 60 - 70**

PROPERTY	UNIT	LIMITS	TEST METHODS
Specific Gravity @25°C	-	1.00 - 1.06	ASTM D-70
Penetration @25°C, 100gm, 5sec	0.1MM	60 – 70	ASTM D-5
Softening Point, Ring & Ball	°C	49 – 56	ASTM D-36
Ductility @25°C, after TFOT, Min	CM	100.0	ASTM D-113
Loss on Heating, Max	% Wt.	0.2	ASTM D-6
Drop in Penetration after Heating, Max	%	20.0	ASTM D-6 & D-5
Flash Point Cleveland open cup, Min	°C	232.0	ASTM D-92
Solubility in Trichloroethylene Min	% Wt.	99.50	ASTM D-2042
Spot Test	-	Negative	*A.A.S.H.O.T.102





### BITUMEN SPECIFICATION



### **PRODUCT DATA SHEET**

Penetration Grade Bitumen is commonly used in road construction, surfacing and some industrial applications and is produced from fractional / vacuum distillation of crude oil. Additional processing of this type of Bitumen yields various grades of Bitumen products.

The penetration grade bitumen has a thermoplastic property which causes the material to soften at high temperatures and to harden at lower temperatures. This unique temperature/viscosity relationship is important when determining the performance parameters such as the adhesion, rheology, durability and application temperatures of bitumen.

The Penetration Test determines the hardness of Bitumen by measuring the depth (in tenths of a mm) to which a standard, and loaded needle will vertically penetrate in 5 seconds, through a sample of Bitumen maintained at a temperature of 25°C. Hence the softer the bitumen, the greater will be its number of penetration units.

#### QUALITY:

Our Bitumen supplied is of the highest quality and totally compliant with ASTM and AASHTO, equivalent EN and BS International Standards and Test Methods. SGS and similar independent Quality Testing and Analysis lab certification of our Bitumen products inspected when requested, will be compliant with Product Specifications and International Standards. Assured manufacturing. Quality is Equivalent to BS EN 12591 and BS EN 13924.

Bitumen Grade 60/70 is commonly used to manufacture Asphalt Mixes, Cutback Bitumen, Bitumen Emulsions and Modified Bitumen.

#### **APPLICATION TEMPERATURES RECOMMENDED:**

Storing: 120°C - 150°C
 Mixing: 130°C - 150°C
 Compacting: 120°C - 140°C

#### **PACKAGING:**

New steel drums, reconditioned steel drums or eco-friendly poly bags. Weatherproof packaging is available subject to our standard Terms and Conditions of Sale.

#### STORAGE AND HANDLING RECOMMENDATIONS:

Store in unopened containers. Storage temperature limits  $1^{\circ}$ C -  $50^{\circ}$ C. For normal operations, such as blending and transferring liquid bitumen, temperatures of  $10^{\circ}$ C -  $40^{\circ}$ C above the minimum pumping temperature are recommended.

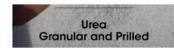






### **UREA GRANULAR & PRILLED**









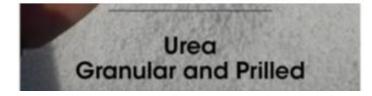




## UREA SPECIFICATION







CHARACTERISTICS	STANDARD
Fraction of nitrogen in dry substance, %, not less than	46.2
Mass fraction of biuret, %, not more than	1
Mass fraction of water, %, not more than:	
- Hygroscopic	0.3
- General	0.5
Mealiness %	100
Dimensions of granules, %:	
Mass fraction of granules size, mm:	
- From 1 to 4, not less	94
- From 2 to 4, not less	70
- Less than 1, not more	3
- Screen residue, 6 mm, not more	Absent
Static strength of granules, MPa (kg / cm²), not less than	1.4 (14)
or	
in terms of 1 granule, N, (kgf), not less than	0.7 (7)



## UREA APPLICATION





**APPLICATION:** It is available in two grades - Grade A for industrial use and Grade B for agriculture. Industrial applications include metal treatment, tanneries, water treatment, glue & resins, wood industry, health & beauty products, construction etc. While Feed Grade Urea is also deployed as animal feed, a nutritional additive used in diets for ruminant livestock such as cattle, sheep and goats, promoting feed digestibility and intake. It is a colourless, odourless solid, highly soluble in water, and practically non-toxic and when dissolved in water, it is neither acidic nor alkaline.

**SYNONYMS:** Carbamide, Basodexan, Carmol etc.

**PACKAGING:** Offered in 25/50/1000 Kg moisture-proof PP/HDPE Bags & Bulk.



## DAP SPECIFICATION



CHARACTERISTICS	SPEC 1	SPEC 2
Appearance	Yellow, light brown, dark brown granules	
N, % min	18	
Total P <sub>2</sub> O <sub>5</sub> , % min	46	
Moisture, % max	1.5 - 2	
Particle Size (1 – 4 mm), % min	85 - 90	
рН	4.4 - 4.8 7 - 8	
Density, Kg/m <sup>3</sup>	920 - 980	
Solubility in water	Highly soluble	



### DAP APPLICATION



This is the world's most widely used fertilizer type and compared to other fertilizer types, DAP has relatively a high nutrient content. When considering the production of DAP fertilizer, it is formulated under the controlled reaction of ammonia and phosphoric acid, containing about 18% nitrogen and 46%  $P_2O_5$ . It forms a hot slurry which is then cooled for granulation and sieving.

**SYNONYMS:** Ammonium Phosphate, Diammonium Hydrogen Phosphate etc. **PACKAGING:** Offered in 25/50/1000 Kg moisture-proof PP/HDPE Bags & Bulk.

### **APPLICATION:**

- DAP is used as a phosphorous and nitrogen supplement in fruit, vegetable, rice, wheat fertilizers and even in the early stage of fruit orchard fertilization. The ammonium present in DAP is an excellent nitrogen source and will be gradually converted to nitrate by soil bacteria, resulting in a subsequent drop in pH. Therefore, the rise in soil pH surrounding DAP granules is a temporary effect and the initial rise in soil pH neighbouring DAP can influence the micro-site reactions of phosphate and soil organic matter.
- widely used as a fermentation agent and nutritional enhancer within the food industry as a buffering agent in baking, yeast nutrient in winemaking and also for mead brewing. It is also used in purifying of sugar and even as a nicotine enhancer.
- Deployed across several industrial processes, too, such as metal finishing and even in the wool dyeing process.
- DAP also acts as a fire retardant. For e.g., For example, a mixture of DAP and other ingredients can be spread in advance of a fire to prevent a forest from burning. It then becomes a nutrient source after the danger of fire has passed.



### MPK SPECIFICATION



### PRODUCT: Monobasic Potassium Phosphate (MKP)

**APPLICATION:** Used in foliar spray & drip irrigation usage in crops besides textile industry, metal surface treatment, paper processing, fermentation etc. **SYNONYMS:** Potassium Dihydrogen Phosphate, Monopotassium salt etc. **PACKAGING:** Offered in 25/50/1000 Kg moisture-proof PP/HDPE Bags & Bulk.

A water-soluble fertiliser with high Phosphate content along with the optimum amount of Potash and Phosphorus. It is readily soluble in water, aids rapid root & seed development, enhances plants resistance ability. Thus, ensuring producers with high-quality yield and aides in timely ripening of the crops.

CHARACTERISTICS	STANDARD
Appearance	White crystal/powder
Density	2.3 g/cm <sup>3</sup>
Melting Point	252.6°C
Purity, %	99.0 min
P <sub>2</sub> O <sub>5</sub> , %	52.0 min
Water, %	3.0 max
рН	4.3 - 4.7
K₂0, %	34.5 min
Water Insolubles	0.1 max
Chlorides	0.2 max
Iron (Fe), %	0.003 max
Arsenic (As), %	0.005 max
Heavy metal, %	0.005 max



### NPK SPECIFICATION



**SPECIFICATIONS:** Chemical Compound Fertilisers

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The fertiliser numbers on refers to the NPK ratio, which determines the ratio of nitrogen, phosphorus, and potassium in the package. Different plants often have different nutritional requirements. As a result, there are many different NPK fertilizer blends available in the marketplace.

**APPLICATION:** Used as a complex fertiliser for supply of all three major nutrient across crops like Wheat, Paddy, Maize, Pulses, Sugarcane, Vegetables etc.

PRODUCT: Nitrogen Phosphate Potassium (NPK)

**SYNONYMS:** Nitrophoska, Nutricote, Osmocote etc.

PACKAGING: Offered in 25/50/1000 Kg moisture-proof PP/HDPE Bags & Bulk.

ITEM	SPEC 1	SPEC 2	SPEC 3	SPEC 4
Total nutrition	54.0	50.0	49.0	40.0
$N + P_2O_5 + K_2O$	24-12-18	17-8-25	11-22-16	14-12-14
Water soluble	98.0 min			
phosphorus, %	96.0 111111			
CI, %	3.0 max			
H <sub>2</sub> O, %	2.5 max			
Appearance & Form	White Powder, 0 - 1 mm, 90% min			

**SPECIFICATIONS:** Water Soluble Fertilisers

ITEM	SPEC 1	SPEC 2	SPEC 3	SPEC 4	SPEC 5
Total nutrition	60.0	57.0	51.0	48.0	45.0
$N + P_2O_5 + K_2O$	20-20-20	19-19-19	1 <i>7</i> -1 <i>7</i> -1 <i>7</i>	16-16-16	15-15-15
Water soluble phosphorus, %	98.0 min				
CI, %	3.0 max				
H <sub>2</sub> O, %	2.5 max				
Appearance & Form	White Powder, 0 - 1 mm, 90% min				



### MOP SPECIFICATION



### **PRODUCT: Muriate of Potash (KCI)**

#### PRODUCT DATA SHEET

Potassium stimulates the growth of strong stems and gives the plant some disease resistance by promoting thickness of the outer cell walls. Adequate potassium can reduce moisture loss from growing plants, thereby giving some drought resistance. Potassium improves colour, flavour and storing quality of fruit and vegetables. Better produce quality and reduces cost of pest management. MOP is the most concentrated form of granular potassium and typically the most cost effective. The even granule size of MOP allows for accurate spreading and ensure maximum utilization efficiency. It is commonly blended with SSP to supply major nutrients for pasture-based systems.

#### APPLICATION:

- It is further deployed for other applications in animal nutrition, irrigation systems, and even industrial applications like drilling fluids etc.
- Granular MOP is applied directly as a basic nutrient for agricultural crops like sugar cane, fruit trees, vegetables, other field crops and for fertilising pastures. It is also a component to mix nitrogen-phosphoruspotash fertilizers.
- Fine MOP is used as a feedstock to manufacture complex mineral fertilizers for agriculture. In some parts of the globe, fine MOP is applied directly to the soil as a single nutrient fertilizer. It is also used to manufacture granular MOP.
- Technical MOP is used in metallurgy, biotechnology, chemical, petrochemical, food, pharmaceutical, perfumes and cosmetics industries etc.

**SYNONYMS:** Potassium Chloride, Sylvite, Enseal, Klor-Con, Chlorvescent etc. **PACKAGING:** Offered in 25/50/1000 Kg moisture-proof PP/HDPE Bags & Bulk.

### SPECIFICATIONS:

NO.	CHARACTERISTICS	SPEC 1 MOP 60	SPEC 2 MOP 61.5
1.	Appearance	Pink/Red Granular	White Crystals
2.	Water-soluble K₂O, % min	60 (K = 51%)	61.5 (K = 49.8%)
3.	Potassium chloride (KCI)	95.4%	97.5%
4.	Others (NaCl, MgCl <sub>2</sub> , K <sub>2</sub> SO <sub>4</sub> , MgSO <sub>4</sub> , CaSO <sub>4</sub> , etc.)	4.4%	2.5%
5.	Moisture, % max	0.2%	0.2%
6.	Granulometry		
	(2.0 - 4.8 mm)	95% min	-
	> 0.8 mm	-	10%
	0.16 – 0.8 mm	-	80%
	< 0.16 mm	_	10%
	d <sub>50</sub>	$3.0 \pm 0.2  \text{mm}$	0.48 mm



## SULFUR SPECIFICATION



### PRODUCT: Sulphur Granular, Lump, Powder

Sulphur is one of the most important agro - industrial raw materials. Today, most elemental sulphur is obtained as a by-product recovered from Oil & Gas production in the sweetening process and considered a strategic product.

**APPLICATION:** Major derivative is sulphuric acid (H<sub>2</sub>SO<sub>4</sub>). Sulphur is also directly or indirectly used in batteries, solvents, detergents, fungicides, and vulcanisation of rubber. Further, utilised in the manufacturing of phosphate fertilizers, synthetic fibres, cosmetics, gun power, matches and in a host of other products of chemical, pharmaceutical and manufacturing industries.

PACKAGING: Offered in 1000/1250 Kg moisture-proof Jumbo Bags and Bulk.

CHARACTERISTICS	Granular	Lump and Powder
Mass fraction of sulphur	99.80% (Min)	99.80 % (Min)
Organic Ash weight	0.07 % (Max)	0.04 % (Max)
Inorganic Ash weight	0.03 % (Max)	0.01 % (Max)
Moisture weight	0.50 % (Max)	0.50 % (Max)
Mechanical impurities	Absent	
Colour	Bright Yellow	

AVG. SIZE DISTRIBUTION and CHARACTERISTICS for Granular			
2 - 11 mm = 95% / 3 - 6 mm = 80% / 1 - 3 mm = 5%			
Angle of Repose = $33^{\circ}$ Density (Kg/m <sup>3</sup> ) = 1150 (Min)			



### CHEMICAL DEPARTMENT



Our Additives, Chemicals & Industrial Minerals portfolio



This portfolio is engaged in catering to the Industrial, Mining, Water Treatment besides Oil & Gas sectors with a wide variety of chemicals ranging from Acids, Additives, Metallurgical Minerals, Reagents, Collectors, Frothers, Plastic Raw materials, Polymers etc.



### CHEMICAL DEPARTMENT





#### **OUR PRODUCT RANGE:**

- Acetic Acid
- Activated Carbon
- Additives for blending
- Aluminium Sulphate
- Anthracite
- Calcium Carbonate
- Calcium Hydroxide (Slaked lime)
- Calcium Hypochlorite
- Calcium Oxide (Quicklime)
- Caustic Soda (Sodium Hydroxide)
- Chlorinated Paraffins
- Cobalt Sulphate Heptahydrate
- Copper Sulphate
- Formic Acid
- Ferrous Sulphate Monohydrate
- Frothers
- Ethylene Glycol: MEG, DEG, TEG
- Hydrochloric Acid
- Hydrogen Peroxide
- Iron Oxide
- Iron Powder

- Magnesium Oxide
- Methanol
- Nitric Acid
- N-Hexane
- Salt (Sodium Chloride)
- Soda Ash (Sodium Carbonate)
- Sodium Sulphite
- Sodium Hydrosulphite
- Sodium Metabisulfite (SMBS)
- Sulphuric Acid
- Plastic Raw Materials & Polymers: HDPE, LDPE, LLDPE, PC, PE, PS, PP, PBT, PET, PVC resins, ABC etc.
- Perlite Filter Aid
- Phosphoric Acid
- Polyol
- Poly Aluminium Chloride (PAC)
- Reagents
- Toluene diisocyanate (TDI)
- Methylene Diphenyl Diisocyanate (MDI)
- Detergent and Cosmetic (LABSA & SLES)
- Xanthates (SAX, SEX, SIPX, SIBX, PAX, PBX)



### **CONTACT US**



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