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WATER TREATMENT & SOLUTIONS

PHOSPHONATES ~ GUAR GUM ~ MAGNESIUM CHLORIDE

BIO CULTURES ~ BIOMASS PRODUCTS

PHOSPHONATES ~ THE CUBLEN® BRAND

Stan Chem International is proud to distribute a full range of Phosphonates manufactured by **Zschimmer & Schwarz**, Germany. ZSM has focused on manufacturing and marketing Phosphonates in acid and/or salt forms under the brand name **CUBLEN®** for many years.

The ZSM range comprises the following Phosphonate types:

- **HEDP** (1-Hydroxyethane 1,1 – diphosphonic acid)
- **ATMP** (Amino tris (methylene phosphonic acid)
- **EDTMP** (Ethylenediamine tetra (methylene phosphoric acid)
- **DTPMP** (Diethylenetriamine penta (methylene phosphonic acid)
- **HDTMP** (Hexamethylenediamine tetra (methylene phosphonic acid)
- **HEMPA** Hydroxyethylamino bis (methylene phosphonic acid)
- **PBTC** (2-Phosphonobutane – 1, 2, 4 – tricarboxylic acid)

The most important fields of application are:

- Detergents and household cleaners, dish-washing liquids, industrial cleaners, glass and bottle cleaning
- Textile auxiliaries
- Cosmetics
- Oilfield water treatment
- Cooling water treatment
- Stabilisation of peroxides
  Stabilisation of bleaching baths
- Corrosion inhibition
- Liquification of concrete, liquification of ceramic slurries, dispersion of pigments in paints
- Reverse osmosis / membrane cleaning, desalination

For further details, please look at ZSM website: www.zsm.de

GUAR GUM

The Stan Chem Group is a major supplier of Guar Gum. It is used as a coagulant aid in water treatment to increase floc size and improve filtration efficiency. Inorganic suspensions are readily flocculated by Guar without preliminary treatment. Wastewater containing organic matter must be pre treated with ferric sulphate and lime in order to initiate coagulation. Large flocs are formed which resist compaction and are easily settled or filtered. As Guar is an accepted food additive it can be used for drinking water plants and is accepted by most public water utilities worldwide. *See separate data sheet on Guar Gum*

MAGNESIUM CHLORIDE

The Stan Chem Group is a major supplier of magnesium chloride flakes. This material can be used as a Magnesium source for phosphate removal in waste water (i.e. manure, municipal water treatment, waste water treatments of food processing industry). The phosphate can be precipitated by producing Magnesium Ammonium Phosphate (Struvite). In stead of $MgCl_2$, $Mg(OH)_2$ can also be used. Magnesium Chloride can also be used in combination with $Ca(OH)_2$ in non-sulfate containing waste streams. By adding magnesium chloride & calcium hydroxide, magnesium hydroxide is formed in-situ, and contaminants (metals or organics) co-precipitate. In this way, process water can be re-used.

BIO CULTURES ~ BIOMASS PRODUCTS
MUNICIPAL & FOOD PROCESSING ~ WASTEWATER TREATMENT

The Stan Chem Group offers a range of Biomass products called **BIOSTAN** as a natural solution to support a range of different applications, especially in municipal and food processing as well as waste water treatment. Environmental conditions are necessary to maximise growth of biocultures in the biological treatment containment.

pH	7.0
Dissolved oxygen	2.0 + ppm
C/N/P ratio	100/5/1
Temperature	30 Deg C
Toxic metals	0 ppm

Above are the optimum conditions necessary for healthy biomass to grow within the waste water treatment system. You need to provide and maintain this growth environment to allow the biomass to work, if not then the biomass will not work as efficiently as it could to remove waste organics.

Dosage rate and application schedule for **BIOSTAN** dry powder products

For start-up:	Days 1-2-3-4 = Approx 11.50 kgs per MGD flow* Days 5-6-7-8 = Approx 4.50 kgs per MGD flow*
For maintenance:	500gms of product per day per MGD flow* every other day or as indicated by system operations

Above dose rates and schedules can be adjusted to fit particular projects. If you have a difficult project, increase the kilos per day and/or increase the number of days at each level of application.

If your system only needs a slight enhancement, dose rates and schedules can be reduced. *It is possible to under dose, but it is not likely that you would ever over dose*. It is best to evaluate removal results and adjust the dose rate and schedule accordingly.
Never apply less than 2.50kgs per day for the start-up schedule no matter how long the flow of the treatment system. It is very important to inoculate with ample starting bio-seed.

The maintenance dose may or may not be necessary in any given system. If applied, it will prevent the slow deterioration of the quality of biological population. At least 500gms of **BIOSTAN** product per MGD flow* once each week is recommended.

* MGD = million US gallons per day = 3.8million litres per day

BIO CULTURE BIOSTAN 50 ~ MUNICIPAL & FOOD PROCESSING AND WASTE WATER TREATMENT

BIOSTAN 50 is a blend of carefully selected and laboratory adapted micro-organisms formulated for municipal and food processing wastewater, as well as most types of non-industrial wastewater flows.

BIOSTAN 50 produces enzymes, such as protease, amylase, cellulase and lipase needed to degrade human waste and other organic wastes resulting from dairy, meat, vegetable, sugar and most commercial food processing plants.

Specification:

Product:	**Microbial cultures and enzyme systems**
Form:	**Dry free flowing powder**
Colour:	**Tan to light brown**
Storage:	**Cool dry place out of direct sunlight**

It is not necessary to pre-hydrate **BIOSTAN 50** prior to application. After checking and adjusting the environmental conditions of the system to *optimum* levels for biological growth, add the desired dose to a well aerated, well mixed area of the containment or directly into the inflow line of the aerated tank.

Directions of use: see general data information above regarding environment, dose & application rates

BIO CULTURE BIOSTAN PRODUCT 60 ~ BIOLOGICAL FAT & GREASE TREATMENT

BIOSTAN 60 contains selected and adapted bacterial cultures and purified enzyme systems that have the ability to liquefy fats, greases, olefins and vegetable oils suspended in wastewater. **BIOSTAN 60** has been designed to work effectively in restaurant drain lines and grease traps, holding tanks and pumping outlets.

The enzyme group rapidly begins to work and the bacterial cultures offer long lasting action. Fat and grease reduction will occur under both anoxic and aerobic conditions.

BIOTSTAN 60 does not contain caustics or acids, and the material will not harm pipes or other waste water treatment equipment.

Specification:

Product:	**Dormant bacterial cultures and purified enzymes**
Form:	**Dry free flowing powder**
Colour:	**Tan to light brown**
SG:	**0.5 – 0.6**
Storage:	**Cool dry place out of direct sunlight (10-40Deg C)**

Optimum system conditions:

Temperature:	**10 – 45 Deg C**
No toxic chemicals	

Directions of use: For taps and pumping outlets, apply 500gms per 1900L of tank capacity once a week or as required by site conditions.
For drain lines, mix 500gms with 8L of warm non-chlorine water and pour a small quantity of this solution into each drain opening at the end of every working day.

BIO CULTURE BIOSTAN PRODUCT 65 ~ BIOLOGICAL FAT & GREASE TREATMENT

BIOSTAN 65 contains selected and adapted bacterial cultures and purified enzyme systems that have the ability to liquefy fats, greases, olefins and vegetable oils suspended in wastewater. **BIOSTAN 65** has been designed to work effectively in sewage drain lines, holding tanks and pumping stations.
The enzyme group rapidly begins to work and the bacterial cultures offer long lasting action. Fat and grease reduction will occur under both anoxic and aerobic conditions.

BIOTSTAN 60 does not contain caustics or acids and the material will not harm pipes or other waste-water treatment equipment.

Specification:

Product:	**Dormant bacterial cultures and purified enzymes**
Form:	**Dry free flowing powder**
Colour:	**Tan to light brown**
Storage:	**Cool dry place out of direct sunlight (10-40Deg C)**

Optimum system conditions:

pH:	**6.0 – 8.5**
Temperature:	**10 – 45 Deg C**
No toxic chemicals	

Directions of use: For taps and pumping stations apply 500gms per approx 1900L of tank capacity once a week or as required by site conditions.
For sewer lines, mix 500gms with 8L of warm non-chlorine water and pour a small quantity of this solution into each drain opening at the end of every working day.

Further biological products are available from Stan Chem, more details on request

Caution: *People allergic to dust should wear nose, eye and mouth protection when using this product. In the event of direct contact with eyes or skin, flush affected area with water.*