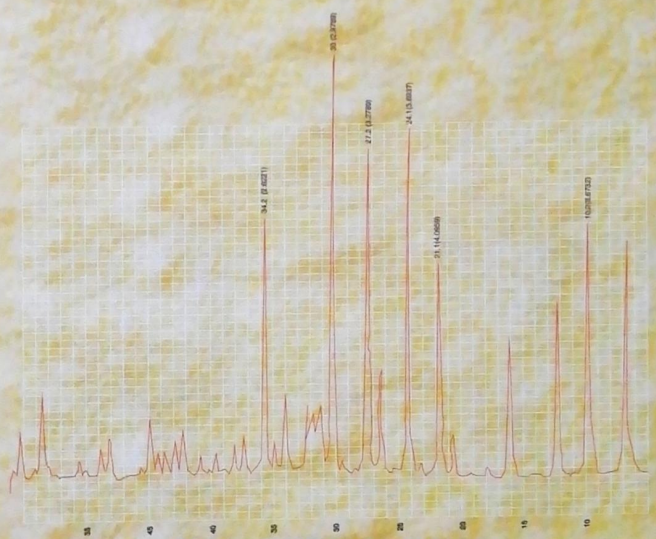
DET BUILD® - 150

ZEOLITE

The Wonder Detergent Builder

That is
- Economic
- Eco-Friendly
- Import Substitute



X-ray Diffractograme

SPECIFICATION ZEOLITE 4A DETERGENT GRADE

Test	Unit	Specification	Test Results
Form	--	White powder	White powder
Moisture Content	%	5.0 Max	4.00
Ignition Loss	%	20 ± 2	19.24
pH of 2% aqueous suspension	--	10.5 ± 1	10.66
Temped bulk density of powder	Gm/lit	400 - 600	422
Whiteness (With std. MgO)	-	100 min	102
Cat ion exchange capacity	mg $CaCO_3$/gm	290 min	300
Particle size d(50)	Micron	3-8 µm	4.6

Zeolite based Detergents

GUJARAT MULTI GAS BASE CHEMICALS PVT. LTD.
Opp. ONGC Colony, Palavasna, Mehsana-384003. INDIA

ISO 9001 BUREAU VERITAS Certification Excluding Design

STAR EXPORT HOUSE RECOGNISED BY GOVT. OF INDIA

Science in the service of Industry & Environment

TUESDAY, 13 JULY, 95 THE ECOMOMIC TIME

Synthetic Zeolite developed indigenously

Zealous technocrat strikes it big

P.S.Anantharaman
MEHSANA 12 JULY

Detergent giant Procter and Gamble Orders the first Consignment of Det-build-150 (Zeolite) First time developed by Dr. Patel, the pramoter of Gujarat Multi Gas base Chemicals Pvt ltd. Mehsana

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AN EPOCH MAKING PRODUCT

The introduction of DETBUILD-150 heralds a new era for Indian detergent industry. For the first time Indian detergent manufacturers now have an access to a detergent builder that is :

- Ecofriendly
- Economic
- Equivalent to international brands.
- Indigenously developed
- Made from locally available resources (bauxite) and
- substitute of hazardous STPP

Eutrophication, accumulation of excessive organic matter in stagnant waters, is becoming more and more of concern worldwide. Conventional detergents that carry phosphates into water streams cause this effect that lead to growth of algae in water. Rate of growth of algae in water is directly related to availability of phosphates, a condition corresponding to high nutrition (eutrophic condition). The process of decaying algae in water causes depletion of oxygen levels and water based flora and fauna get asphyxiated. Excessive eutrophication also leads to siltation. Ingress of high percentage of phosphates from detergents drained into sewage lines has a large share in this phenomenon and worldwide it is being felt that it is time to eliminate phosphates from detergent formulations. After a careful scrutiny of various chemicals available the scientists worldwide have come to accept zeolites as the most cost effective substitutes for phosphates. These products are not only ecofriendly but are also not detrimental to the existence to micro-organisms, fish and other life bearing organisms in water. In addition, Det-build-150 has a strong affinity of exchanging ions with heavy metals whereby toxicity of water is further reduced.

What is DETBUILD-150 ?

DETBUILD-150 is Synthetic Zeolite-A, which is Sodium Aluminium silicate. As it is made from locally available raw materials such as silica and bauxite, it is highly cost effective and is a fully indigenous product. DETBUILD-150 (Zeolite) has a three dimensional frame work structure in which silicon and aluminium atoms are tetra hydrately co-ordinated in oxygen atoms. The Frame work structure enfolds cavities containing water molecules and cations that are capable of undergoing dispersion and cation exchange. The presence of aluminium in the frame work carries 1 unit of negative charge for each aluminium atom. The charges are neutralized by exchange cations that are in aquition within the Zeolite structure.

Benefits of DETBUILD-150 in Detergent Formulations.

A series of scientific experiments conducted to study the suitability of DETBUILD-150 in detergent formulations have indicated following results :

1. DETBUILD-150 can safely substitute STPP. However, the best results are obtained by replacing 50% of STPP by DETBUILD-150. It give more foam and imparts better foam stability.
2. DETBUILD-150 in detergent also acts as soil anti redepositing agent.
3. DETBUILD-150 in detergent cakes ensures better after use conditions on shelves and reduces unwanted losses.
4. DETBUILD-150 Makes the detergent free flowing.
5. DETBUILD-150 is lighter in weight and more voluminous than STPP.

Beneficial effects of DETBUILD-150 on soil & environment :

Zeolite of which DETBUILD-150 is made of has been found to have following benefits for soil & environment.

1. DETBUILD-150 helps to improve the health of animals and fish, it acts as carrier for proteins and vitamins.
2. DETBUILD-150 improves soil condition and ensures growth of better crops according to the Japanese researchers. Carrots showed 63% improvement in one such experiments.
3. Besides, DETBUILD-150 are used for the removal of radioactive isotopes from the effluent emanating from the atomic energy plants.

DETBUILD-150 is absolutely safe to humans and environment :

Extensive safety tests conducted on DETBUILD-150 have proved beyond doubt that it is absolutely safe to humans as well as environment.

DETBUILD-150 is non-toxic to aquatic organisms and does not contribute to malnutrition of lakes and steams.

DETBUILD-150 is thermodynamically unstable in aqueous solution at environmental PH's and slowly degenerates into simple components commonly found in nature.

Main conclusion of safety tests on DETBUILD-150 are :

- Essentially non-toxic.
- No effect at high levels in the diet.
- Projected to present no silicosis hazard.
- Non sensitizer.
- No evidence of percutaneous toxicity.
- Non irritating to the eyes.
- Non irritating to skin.