# **NUT SHELL**

NUT SHELL cellulose is ground nutshell or walnut hulls. It is used for the treatment of lost circulation. NUT SHELL material is available in fine, medium, and coarse particle sizes, and may be used in all types and densities of fluid systems. NUT SHELL material may be used as a granular-type lubricant to reduce torque and drag.

#### TYPICAL PHYSICAL PROPERTIES

Physical appearance .....: Brown granules Specific gravity ...... 1.2 – 1.4 (app.)

Solubility (in water) .....: Insoluble

Bulk density .....: 550 - 650 kg/m3(app.)

#### PARTICLE SIZE DISTRIBUTION

Fine ...... 0-3 mm Medium...... 3-5 mm Coarse ......5-7 mm

(alternative grinding sizes can be produced upon bulk request )

#### **APPLICATIONS**

NUT SHELL cellulose is an effective lost circulation treating material. It has a granular shape, and can be used in a blend of various sizes (fine, medium, and coarse) to prevent lost circulation or regain returns once losses begin. NUT SHELL hulls can be produced from two different types of material: hazelnut (pecan) and walnut. Treating levels depend on the severity of the losses and type of formation where the losses occur. NUT SHELL material may be mixed with other shaped materials to provide a wide variation for optimum control. NUT SHELL may be used to treat the entire system or added as a concentrated pill. NUT SHELL material can be added to other special slurries, such as high fluid loss squeezes, to assist in forming strong bridging plugs. NUT SHELL material has a high compressive strength, and can be used, if desired, as a lubricant as well.

### **ADVANTAGES**

- Unaffected by pH or temperature
- As it is inert additive, it is compatible in all types and densities of fluids
- Will not ferment
- Based on particle shape, size, and compressive strength, it is a superior lost circulation additive

## LIMITATIONS AND CAUTION

- Larger-sized shale-shaker screens will be needed to retain the material in the system
- When using large concentrations in non-water-base fluids, increased amounts of wetting agent may be needed

### TOXICITY AND HANDLING

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described on the Material Safety Data Sheet (MSDS).

### PACKAGING AND STORAGE

NUT SHELL material is packaged in 25Kg sacks (on 1 MT pallets , wraped and shrinked on request ). Store in a dry location away from sources of heat or ignition, and minimize dust.