

"HEDP" powder**deflocculant, sequestrant****MSDS**

MONSANTO COMPANY

800 NO. LINDBERGH BLVD.

ST. LOUIS, MO 63167

PRODUCT IDENTIFICATION**DEQUEST 2016D** comprises:Na₄HEDP; 1-hydroxyethylidene-1,1-diphosphonic acid, tetrasodium saltCH₃C(PO₃Na₂)₂(OH)

DOT label: Not Applicable

U. S. Surface Freight Classification: Washing Compound, N.O.I.B.N., Liquid

CAS No.: 3794-83-0

PRECAUTIONARY MEASURES

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: Where there is a significant potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin Protection: Although Dequest 2016D deflocculant and sequestrant does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory Protection: Avoid breathing dust. Use NIOSH/MSHA approved respiratory protection equipment (full facepiece recommended) when airborne exposure is excessive. If used, full facepiece replaces need for chemical goggles and/or face shield. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR ~ 1910.134.

Ventilation: Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

FIRE PROTECTION INFORMATION

Although this material does not meet the parameters for flammability, it will burn in the presence of a strong ignition source after the water is removed.

Extinguishing Media: Water spray, dry chemical, CO₂, or other Class B extinguishing agent.

Special Firefighting Procedures: When this product is involved in a fire, firefighters or others should wear full protective clothing and self-contained breathing apparatus not exposed to vapors or products of combustion. All fire fighting equipment, including protective clothing and self-contained breathing apparatus, needs to be decontaminated after use.

REACTIVITY DATA

Materials to Avoid: Avoid contact with acids. Also, avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: Phosphines may form after all the water has been removed. CO, CO₂, and oxides of phosphorous may also be formed.

Hazardous Polymerization: Does not occur.

HEALTH EFFECTS SUMMARY

The following information summarizes human experience and results scientific investigations reviewed by health professionals for hazard evaluation of DEQUEST 2010 Deflocculant and Sequestrant and development of Precautionary Statements and Occupational Control Procedures recommended in this document.

Effects of Exposure

Skin contact is expected to be the primary route of occupational exposure to DEQUEST 2016D Deflocculant & Sequestrant. Though occupational exposure to this material has not been reported to cause significant adverse health effects.

Toxicological Data

Data from Monsanto studies indicate the following:

Oral - Slightly Toxic	(Rat LD50: 2850 mg/kg)
Dermal - Practically Nontoxic	(Rabbit LD50: >5000 mg/kg)
Eye Irritation - Slightly irritating	

Following repeated exposures (90 days) in their feed, rats showed minor changes in one study and no adverse effects in another; dogs dosed orally (30 days) also showed only minor changes in one study but not in another.

No birth defects were noted in rats or rabbits given orally during pregnancy. No effects were seen on the ability of male and female rats to reproduce when in their diet for 2 successive generations. DEQUEST 2010 deflocculant produced no genetic changes in standard *in vitro* assays using bacterial and mammalian cells.

PHYSICAL DATA: Appearance: White Powder, Odor: odorless, Melting Point: 100°C, pH (1% solution at 25°C): 10-12

SPILL, LEAK, & DISPOSAL INFORMATION

In case of spill, sweep, scoop, shovel, or vacuum up spilled material and dispose of as noted below. If possible, it is also acceptable to contain spilled material and recover it as a liquid prior to disposal. Keep concentrated product out of sewers, watersheds and water systems. Disposal Information: Dispose of in accordance with all applicable local, state and federal regulations. Disposal by incineration is recommended. Disposal of liquid in a waste-water treatment facility is also acceptable if approved by the facility.