

# Hub-Per DS

Hub-Per DS finds use as a cold cleaner and as a vapor degreasing solvent. It has a high acid acceptance and can be used in all vapor degreasers now on the market. Hub-Per DS with its special stabilization gives users increased protection against Stainless Steel pitting and corrosion. As a heavily stabilized solvent, Hub-Per DS is intended for use in the most rigorous vapor degreasing applications.

Hub-Per DS may be used as a raw material for fluorocarbon refrigerants, solvents and aerosols, for flux less aluminum brazing, and as a solvent or drying agent.

The stabilizer system for Hub-Per DS is designed to withstand the stresses of vapor degreasing metal parts, to guard against contaminants such as metal chips and fines, acids, alkalis, and oxidants.

Hub-Per DS is especially suitable for degreasing metals that corrode and stain easily such as aluminum, magnesium, zinc, copper, and their alloys.

Meets: Federal Specification O-T-236c, Grade B

## Features & Benefits

High acid acceptance	Protection against pitting, less rejects Longer life, lower cost
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## Physical Data

Boiling point @ 760 mm Hg, °C	120.1 – 121.6
Appearance	Clear and free of suspended matter
Color APHA	15 max
Alkalinity, as NaOH, wt. %	0.0030 max
Acidity, as HCl, wt. %	None
Water content, wt. %	0.0030 max
Specific gravity	1.61 – 1.61
Free halogens	None
Residue on evaporation, wt. %	0.0050 max

Acid acceptance, as NaOH, wt.%	0.13 min
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## Operating Conditions

### Inherent Stability

This refers to the stability of the perchloroethylene molecule. If the stabilizers used in Hub-Per DS are depleted, a runaway reaction with aluminum will not occur. To various degrees, this aluminum-catalyzed breakdown may occur with 1-1-1 Trichloroethane, Trichlorethylene, and Methylene Chloride if the stabilizers are depleted.

### Increased Vapor Flushing

A metal workload condenses solvent vapor until it reaches the temperature of the vapor. At this point, condensation or flushing ceases and cleaning is complete. Once the workload has reached the temperature of the vapor, these can be no additional cleaning regardless of how long the work is kept in the degreaser. Thus, with Hub-Per DS (BP 250°F) 75% more vapor flushing is obtained than with trichlorethylene.

### Better Cleaning

Cleaning tests and field studies have shown Hub-Per DS typically cleans better than other chlorinated solvents. This is due to increased vapor flushing and the higher boiling point. Oil and greasy soils are more fluid and more soluble at higher temperatures.

### Drying Solvent

All four chlorinated solvents physically combine with water at a temperature lower than their boiling point. This physical combination of solvent and water (called an azeotrope) has a specific composition and boiling point. Hub-Per DS is the best drying solvent due to its high boiling point (250°F), which drives water off the workload rapidly.

Useable with all materials of construction.

Corrosion strip tests and field experience have shown Hub-Per DS suitable for use in mild steel and galvanized as well as stainless equipment.

## Waste Disposal

Dispose of in accordance with all federal, state and local health and pollution regulations. Hub-Per DS is normally recovered from residues by distillation. Small quantities may be disposed of via an incineration-scrubber system or a licensed waste hauler. If regulations permit, wet absorbent materials may be air dried in a safe, open, unoccupied area.

Leaks should be stopped. Spills should be cleaned up immediately. Large spills should be contained and removed by vacuum truck. Smaller spills may be soaked up with absorbent materials. Which should be placed in closed containers, labeled, and stored in a safe place out of doors to await proper disposal. Persons performing this work should wear adequate personal protective equipment and clothing.

## Caution

Under normal conditions, Hub-Per DS may be stored satisfactorily in galvanized iron, black iron, or steel. Although not required, Hub-Per DS should be stored under pressure. Aluminum and titanium are not generally recommended for storage or handling. Store drums in a cool place, bung up and closed tightly. Ventilation should be provided at the floor level.

Do not store in pits, depressions and basements, or in unventilated areas.

WARRANTY: THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.

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## Our people. Your problem solvers.

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