# Car Radiator Maintenance

This playbook details the steps needed to clean and maintain a car's radiator. It ensures the radiator is leak-free and operating efficiently to cool the engine.

### Step 1: Preparation

Gather all necessary tools and supplies, including a screwdriver, radiator flush solution, coolant, distilled water, a funnel, and a container for fluid disposal. Ensure the engine is cool before starting.

### Step 2: Engine Drain

Locate the radiator drain plug at the bottom of the radiator. Place a container underneath, and carefully open the plug to drain the old coolant into the container. Make sure to dispose of the coolant safely according to local regulations.

### Step 3: Flush Radiator

Close the drain plug and fill the radiator with a radiator flush solution, following the instructions on the product. Start the engine, let it run for the time specified on the flush solution, then turn off the engine and let it cool.

### Step 4: Drain and Rinse

Drain the flush solution as per step 2. Then refill the radiator with distilled water, start the engine, heat it up to operating temperature, and then let it cool. Drain again to rinse out any leftover debris and flush solution.

### Step 5: Refill Coolant

Once the radiator is fully drained, close the drain plug securely and fill the radiator with fresh coolant. Use a 50/50 mix of coolant and distilled water or as recommended by your vehicle's manufacturer.

### Step 6: Check for Leaks

Once you’ve filled the radiator, check for any leaks by inspecting the area around the drain plug and hoses. Start the engine and let it run for a few minutes while monitoring the temperature gauge to ensure it's operating normally.

### Step 7: Final Assessment

After the engine has reached operating temperature and no leaks are detected, do a final check of the radiator cap and hoses for tightness and good condition. Replace the radiator cap and clean up any spilled fluids.

## General Notes

### Safety

Always make sure the engine is cool to the touch before starting, to prevent burns from hot coolant. Also wear protective eyewear and gloves.

### Disposal

Used coolant should be collected in a sealable container and disposed of according to your local hazardous waste disposal guidelines. Do not dispose of coolant in drains, on the ground, or in water systems.

### Frequency

This maintenance should be done every 1 to 2 years or as per your vehicle's maintenance schedule to ensure optimal performance.