



# HAVOLINE<sup>®</sup> TWO-CYCLE ENGINE OIL TC-W3<sup>®</sup>

## CUSTOMER BENEFITS

Havoline Two-Cycle Engine Oil TC-W3 delivers value through:

- **Exceptionally clean engines** with minimum combustion chamber deposits, negligible port clogging, clean ring grooves, and free rings.
- **Excellent rust protection**
- **Long spark plug life**
- **Easy mixing and stable mixtures with gasolines** even at low ambient temperatures.

## FEATURES

Havoline Two-Cycle Engine Oil TC-W3 is a high quality two stroke engine lubricant that delivers excellent performance in water-cooled and air-cooled applications. It is formulated to provide excellent lubrication and deposit control in a wide range of applications.

Havoline Two-Cycle Engine Oil TC-W3 contains a special ashless detergent designed to minimize piston rings from sticking to keep the engine operating smoothly and efficiently. Havoline Two-Cycle Engine Oil TC-W3 will keep the engine clean of deposits and will also protect the pistons from scuffing and preignition problems.

To enhance storage and transportation safety, Havoline Two-Cycle Engine Oil TC-W3 contains a high flash solvent. This solvent also allows good mixing with gasoline at very low temperatures.

It is dyed teal blue for easy identification of fuel-oil mixtures in pre-mixed applications.

## APPLICATIONS

Havoline Two-Cycle Engine Oil TC-W3 is recommended as a premium lubricant for use in two-stroke engines where the latest TC-W3 or earlier general purpose lubricants are recommended. These applications include outboard engines, snowmobiles, motorcycles, lawn mowers, scooters, golf carts, chain saws, and other two-stroke powered equipment.

Havoline Two-Cycle Engine Oil TC-W3 is well suited for engines using oil injection systems with fuel/oil mixture ratios of up to 150:1.

Havoline Two-Cycle Engine Oil TC-W3 has excellent low temperature mixing characteristics that make it very suitable for use in cold climate conditions.

Havoline Two-Cycle Engine Oil TC-W3:

- meets the latest requirements of the NMMA TC W3 performance standard
- is formulated to meet ISO-L EGB (JASO FB) passing criteria
- is formulated to meet API TC requirements for use in air-cooled two-stroke applications

The mixing chart below is a guide for correct fuel-blend ratios as recommended by engine manufacturers.

### Ounces of oil to add:

Gallons of Gasoline	1	2	3	4	5	6
16:1 Ratio	8	16	24	32	40	48
24:1 Ratio	5	11	16	21	27	32
32:1 Ratio	4	8	12	16	20	24
50:1 Ratio	3	5	8	11	13	16
100:1 Ratio	2	3	4	6	7	8

## TYPICAL TEST DATA

Product Number	221896
MSDS Number	8629
API Gravity	31.4
Viscosity, Kinematic cSt at 40°C cSt at 100°C	46.5 7.3
Viscosity, Brookfield, cP at -25°C	5500
Viscosity Index	119
Flash Point, °C(°F)	95(203)
Pour Point, °C(°F)	-30(-22)
Sulfated Ash, wt %	0
Base Number, ASTM D 2896	3.8

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing.