



# USING THE REAGENTS

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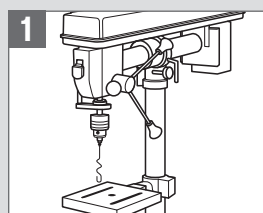
**Marine**

# MIXING THE WTR REAGENTS BEFORE USE

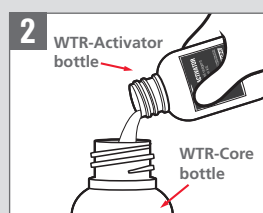
The Water Test Reagent (WTR) Pack contains two separate reagent components: WTR-Core and WTR-Activator. A two-component system is used so that the WTR Pack as-delivered is not classified as Dangerous Goods for transport purposes. The as-delivered reagents cannot be used directly for testing for water in oil, but must first be mixed to form an activated mixture which is then used in tests.

**The reagents should be mixed only when the WTR Pack is received at the place of final use.** Before mixing, both WTR-Core and WTR-Activator must be at a temperature of at least 30°C (but below 40°C, to minimise risk of injury or spillage). This is best achieved by storing the bottles in a warm room (temperature higher than 30°C) for several hours. If this is not possible, the reagent bottles should be gently warmed by placing them, for example, on the cylinder cover of a warm engine or near a hotwater radiator for a short time. The caps of the bottles should be loosened by about half a turn while the bottles are warmed.

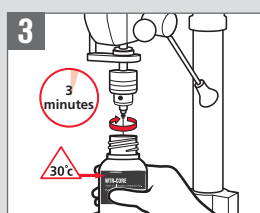
## To mix WTR-Core and WTR-Activator:



1 Fit the curled-wire stirring tool (included in the Test Kit and in WTR reagent packs) in a suitable motor drive such as a column drilling machine.\*



2 Open the WTR-Core bottle and pour all of the WTR-Activator onto the gel material in the WTR-Core bottle.



3 Using the motor drive, and keeping the WTR-Core bottle held securely with the stirring tool inserted as far into the bottle as possible, carefully and thoroughly mix the two components for at least 3 minutes.



4 Complete the mixing by replacing the cap on the bottle tightly, and shaking the bottle vigorously for 1 minute.



5 Check visually that the mixture is homogeneous and free from lumps of gel. Repeat the stirring and shaking if the mixture is not homogeneous.

**The activated mixture must be stored in the original WTR-Core bottle** to ensure it is correctly labelled – see Safety Information section on reagent labels. NB: Once activated, the procedure for use of the reagent is as stated in the Water or Lube Oil Test Kit Manual.

\*Use of a hand-held drill or similar is not recommended for mixing due to the risk of splashing or spillage. If a suitable fixed motor-driven stirrer is not available, the reagents can be mixed by vigorously shaking the bottle by hand for at least 10 minutes. Reagents must be 30°C or warmer. Ensure the bottle is tightly closed before shaking. After shaking, check visually that the mixture is homogeneous and free from any lumps of gel. If it is not, shake for a further few minutes.

## Safety Information on the reagents

The WTR-Core as-delivered contains Calcium Hydride in an inert form. Once the WTR activated mixture has been prepared by mixing WTR-Core and WTR-Activator, Calcium Hydride is transformed into an active form which reacts with water to produce flammable hydrogen gas. The safety advice and regulations which apply to the WTR activated mixture are therefore very different to those applying to the separate components.

**Mixing of the WTR-Core and WTR-Activator should be done only at the place of final use, and the activated mixture should not be transported.**

**The activated mixture is classified for transport purposes as Dangerous Goods Class 4.3 UN 3148 Packing Group I. Special requirements and restrictions apply if such goods are transported.**

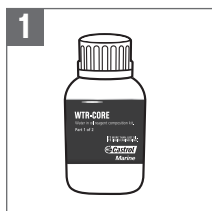
Unsealing the WTR-Core bottle breaks a tab which secures the band covering part of the bottle label. The band will fall away to reveal the safety labelling and information which applies to the WTR activated mixture. Once the WTR-Core bottle's contents have been thoroughly mixed with WTR-Activator, the outer band should be completely torn off and discarded, to leave the new safety information clearly visible.

# THE TEST KIT PACKS

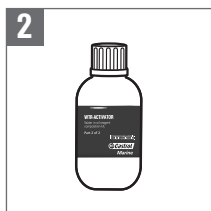
## Water test reagent (WTR) pack

The reagent pack for water test is available via your Castrol Marine representative. Each pack contains sufficient reagent to run approximately 35 water tests.

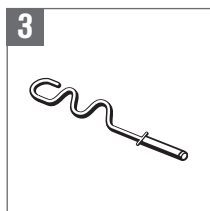
### The pack contains



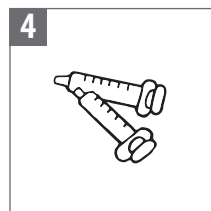
WTR-Core Reagent  
(400 ml)



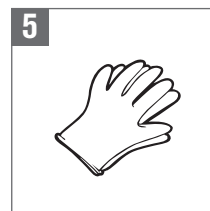
WTR-Activator  
Reagent (380ml)



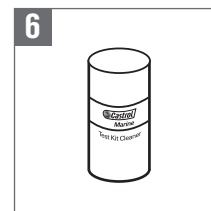
Stirring tool



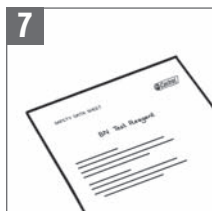
2 syringes



Disposable gloves



Test kit cleaner



Safety Data Sheet

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