



# RECOMMENDATIONS TO REDUCE THE RISK OF BOIL-OVER DURING LOADING OF BITUMEN

This document drawn up by Eurobitume's Sub Committee Safe Handling sets out recommendations for reducing the risk of boil-over during loading. It is the sole responsibility of the carrier to follow the Eurobitume Loading Compatibility Matrix<sup>1</sup> which, in particular, stipulates that: "the tank shall not contain any traces of water or aqueous products". The loading site remains the sole authority to decide whether a tank shall be loaded or not.

The following steps must be included in the haulier's procedures:

## 1. TO UNCOUPLE AN EMPTY TANK ON THE PARKING AREA OF THE HAULIER

The driver must:

- Close the manhole cover to avoid water entering the tank while the tanker is at a standstill;
- Check that there is no residual water or any other residue, or blockage in the manhole dip tray discharge pipe;
- Open the relief vent valve (horizontal position) to reduce condensation.

## 2. AFTER COUPLING TO A TRACTOR UNIT

The driver must be informed of the previous product carried in the tanker, by the operator or the vehicle documents and shall:

- Close the upper relief vent valve (if fitted);
- Inspect the vehicle and check that the valves are properly closed;
- Check that there is no residual water or other residue in the manhole retention tray discharge pipe;
- Visually check through the manhole that there is no residual water;
- Reverse the slope of the tanker;
- Visually check through the manhole again that there is no residual water;
- Secure any second manhole which has been opened (rear of tanker).

## 3. AFTER A TEST CARRIED OUT WITH WATER OR FOLLOWING PROLONGED INACTIVITY

The operator or the staff in charge of inspections must, after authorisation by the technical department, notify the driver that the tank has undergone an inspection for water (vehicle documents, etc.). The driver must carry out the following operations:

- Check that the upper relief vent valve (if fitted) is closed;
- Close the bottom valve;
- Visually check through the manhole that there is no residual water;
- Reverse the slope of the tank (for example: lower the legs of the trailer, or attach tractor unit and reverse up incline);
- Visually check through the manhole that there is no residual water;
- Rear positioned manhole must be made secure before loading.

### CAUTION!

If there is any trace of water in the tanker, the driver must not use the tank and must **immediately** notify his operator. **Under no circumstances must bitumen be loaded in a tanker containing traces of water.**

<sup>1</sup> Eurobitume's Loading Compatibility Matrix is available at [www.eurobitume.eu](http://www.eurobitume.eu)



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## 4. DURING LOADING

When making the appointment, or at the latest on arrival at the refinery or depot: the driver must declare if a test involving water has been carried out on the tanker or if the tank has been inactive for a prolonged period and that adequate procedures to remove residual water have been applied. The driver must comply with the loading procedure at the loading point under the operator's supervision.

The driver, supervised by the loading site operator, must:

1. Check that the upper relief vent valve (if fitted) is closed.
2. Check that the bottom valve is closed.
3. Begin loading the tanker with about 2 tonnes of product<sup>2</sup>.
4. Stop for approximately 10 minutes paying attention to any noise (bubbling, whistling), steam formation from the manhole and/or movement from the tank that may indicate the start of a boil-over.
5. If after 10 minutes no noise, steam or movement has been detected, the driver must repeat steps 3 & 4.
6. Again, after waiting a further 10 minutes, if there is still no reaction, loading can continue according to normal procedures. If there is a reaction of any noise, steam or movement in the tanker after steps 4 or 5, leave the manhole cover open, move away from the loading area and warn the refinery or depot personnel that there may be a risk of a boil-over.

In this case, the refinery or depot personnel will consider the situation and take the appropriate measures (e.g. stop loading altogether, after reaction ceases repeat step 3 & 4).

During work, general safety conditions need to be respected. For guidance, please also consult the Eurobitume documents:

- Eurobitume Safe Handling Card
- Eurobitume Loading Compatibility Matrix
- Eurobitume Burns Card
- Eurobitume H<sub>2</sub>S Card
- Eurobitume H<sub>2</sub>S Pocket Guide
- Eurobitume Safe Delivery Guide
- Eurobitume Safety Shower Guidance

These documents are available at [www.eurobitume.eu](http://www.eurobitume.eu).

Also your bitumen supplier will be available to provide support.

<sup>2</sup> To be specified according to the loading station configuration to ensure that the quantity to be loaded is not exceeded.