

TSAC Diver Recall System

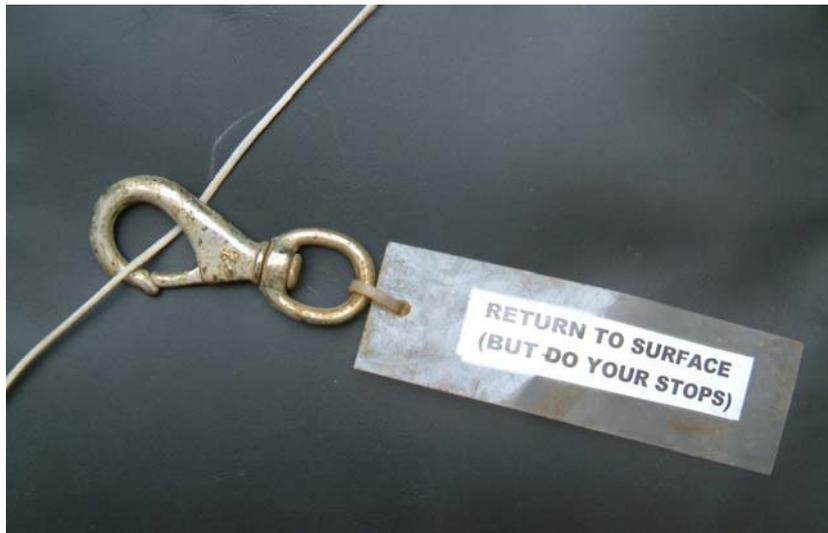
TSAC have introduced a new diver recall system to allow the boat handler to recall the divers to the surface in the case of an emergency. However, the decision to recall divers is entirely at the discretion of the boat handler and shall only be carried out on their instructions.

Typical reasons to recall divers might be the need to leave site because of a diving emergency such as DCI, or the failure of the boat engine leading to the possibility of losing contact with divers on a drift.

Two different recall systems are in place, depending upon whether the divers have an SMB visible on the surface & the judgement made by the boat handler of the particular situation.

SMB Tag

The SMB tag is simply a karabiner with a note attached telling the divers to return to the surface. This is attached to the SMB line and allowed to drop down the line to the SMB reel, where the diver with the SMB will hopefully either hear it hit the reel or see it. If there is no evidence that the divers are returning to the surface give four long pulls on the line and send down a second karabiner.



Thunderflash

The Thunderflash is a cardboard tube with explosive in one end that produces a very loud bang on ignition.



In order for the divers to hear the Thunderflash it needs to be weighted, and fishing weights are provided for this purpose, which are attached to the base of the tube with a paper clip!



In order to ignite the Thunderflash, hold the hollow end in one hand and with your other hand, grip the red tape just below the neck of the tube and unwind the tape removing the end of the Thunderflash. **The Thunderflash should not be ignited next to the fuel cans or oxygen cylinders.**



This short length of tube is the striker, which has an edge "just like the side of a box of matches". You will see on the end of the longer tube of the Thunderflash what looks like a fat match. Gently strike the fat match across the red area of the short length of tube (i.e. the striker). **You now only have 5-7 seconds before it goes off, so get rid of the Thunderflash immediately, throwing it away from the boat, and wait for the bang!**



The boathandler will know if the Thunderflash has detonated as they will hear a dull thud and feel the shock wave! Reportedly the Thunderflash is audible up to 200m away and the shockwave can be felt 150m away. **Do not deploy it in the immediate vicinity of your divers!**

There are three Thunderflashes in each boat. The first is to attract the attention of the divers and the second confirms that they are required to surface – **but they must do any mandatory decompression stops** – the third is in case one of the other two malfunctions.

All divers should be briefed on diver recall.

MATERIAL SAFETY DATA SHEET

The following information has been prepared in accordance with the Health and Safety at work act and the Control of Substances Hazardous to Health regulations. Users should always consult the current legislation prior to any intended use

Pyrotechnic	Maroons
Product Codes	Mk9 Thunderflash

Description

A cardboard tube approximately 30mm in diameter and 150mm in length. Friction ignition. On ignition these devices produce a V. loud report after an approximate 7sec delay, a flash of light and some smoke, cardboard debris is also produced as the cardboard casing fractures. Careful consideration of the noise levels shown below must be taken when positioning these devices.

The peak sound level (dB) of these devices has not been recorded, as the figures are in excess of the dB meter capacity we have available. It would be safe to assume that the noise level would probably in excess of 130 dB at a distance of 10 metres.

Technical Classification

Proper Shipping Name Articles, pyrotechnic
U.N. Hazard Division: 1.4
Compatibility Group: G
UN Classification: 0431
All pyrotechnics packaged to: E135

Packaging

Maroons, micro to medium, are packed in boxes of 100 to UN specifications.
Maroons, large of 25 & 96 to UN specification

Chemicals

Thee unit comprises a uniform blend of the following:

Potassium Perchlorate
Graphite
Dark Aluminium Powder
Red Phosphorus

Hazard

Potential hazards during normal functioning: Do not fire near combustible materials. See special precautions.

Malfunctioning: In the event of a failure to fire, return to manufacturer for disposal.

In Storage: Store in a cool, dry place.

DO NOT place in a fire or consign to normal waste.

EXPOSURE LIMITS: (refers to composition before firing)

8-hour TWA total inhalable dust. 10mg / cubic metre

8-hour TWA total respirable dust. 4mg / cubic metre

INHALATION OF SMOKE PRODUCED FROM THE EFFECT SHOULD BE AVOIDED. EXCESSIVE SMOKE INHALATION MAY CAUSE RESPIRATORY IRRITATION, DIFFICULTY IN BREATHING, HEADACHES, NAUSEA AND MAY RESULT IN VOMITING. IN NORMAL USE WITH ADEQUATE VENTILATION THE SMOKE PRODUCED SHOULD NOT BE A PROBLEM. HOWEVER ANY PERSON FOUND TO BE SUFFERING FROM SMOKE INHALATION SHOULD BE REMOVED TO FRESH AIR AND MEDICAL ASSISTANCE SOUGHT.

STORAGE CONDITIONS: Store in a cool dry place, humidity should preferably be less than 70%. Avoid extreme temperatures. In particular sub-zero temperatures where freezing and re-thaw can alter the performance of the article.

A local Authority permit may be required for storage in bulk. The local Trading Standards Department should be consulted for further details.

Storage only in original packaging

EMERGENCY PROCEDURES

SPILLAGE: Sweep up any loose powder and packaging, dispose of by following the disposal instructions.

FIRE: Cool Pyrotechnic devices and / or packages with water and remove them if possible.

NOTE:

1. The information given in this sheet is for the guidance of and should be checked against current standards and limits published by the H.S.E.
2. The Information given here is true and reliable to the best of our knowledge.
3. The company cannot be responsible for any loss or damage through any miss-use of the product.
4. Smoke, however little may cause problems for asthma sufferers.

General Instructions

1. Ensure you have the correct storage facilities with access only being given to a competent person.
2. Do not smoke when handling pyrotechnic.
3. Keep away from naked flame.
4. Use only with a professional firing system with a safety key and momentary button.
5. Do not use in confined spaces.
6. Do not use near flammable materials.
7. Keep pyrotechnics away from source of electrical ignition (e.g. batteries, stray currents, mobile phones etc.).
8. Take care to ensure that the hot particles do not cause injury to persons or damage to items/equipment/floors etc. If in doubt test outdoors beforehand.
9. Pyrotechnics must only be fired by a person with a direct view of the firing area, ensuring all persons are well clear.
10. The unit should be used or destroyed after strike cap has been removed.

Emergency Contact

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