

Flooding Control Kit

Every vessel should have tools and materials on board to control flooding. The items should be assembled and stored in a flooding control kit. This kit should be stored where it is easily accessible, and up out of potentially flooded areas. In addition, all crew members should be aware of the kit and familiar with the uses of its contents.

Suggested content items are listed here. Some of these items may be omitted, or others might be added based on vessel design.

PLUGS & PATCHES

- Wedges
 - Various sizes
 - Soft wood that swells when wet
- Tapered Plugs
 - Two per sea cock: one in kit; one attached to sea cock
 - Soft wood that swells when wet
- Rubberized Strips and Sheets
 - Gasket material
 - Rubberized cloth
 - Inner tube strips
- Neoprene Fabric (such as pieces of old immersion suits)
- Rags
- Scrap Hose
- Nerf® Ball(s)
- Silicon or Graphite Impregnated Fiber
- Waterproof, Nonhardening Putty
- Plastic, Canvas or Nylon Tarp(s)

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with assistance from
17th U. S. Coast Guard District Alaska &
Commercial Fishing Industry Vessel Safety Advisory Committee

Flooding Control Kit

FASTENERS

- Grease Tape
- Duct Tape
- Bicycle Inner Tube Tape
- Hose Clamps in Various Sizes
- Wire Ties
- Twine
- Oakum
- Waterproof Epoxy & Backing Material

TOOLS

- Knife
- Shears
- Hacksaw
- Hammer
- Hatchet
- Screw Driver(s)
- Pipe Wrench
- Crescent Wrench
- Cordless Drill
- Nut Driver(s) including 5/16" for hose clamps
- Wooden or Rubber Mallet



DON'T FORGET . . .

- Storage Container With Light Attached to Handle
 - Small plastic tote with handle & snap on lid
 - Five-gallon plastic bucket with handle & lid
 - Duffle bag
- Waterproof Flashlight(s)
- Battery-Powered Headlamp
- Hand-held VHF Radio

Vessel Flooding Control



Quick Reference Guide & Suggested Flooding Control Kit Contents

AMSEA
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Quick Reference Flooding Control

ASSESS THE DAMAGE

- Determine if it is leaking or flooding
- Determine whether or not available pumps can keep up
- Alert crew to situation and see that they are prepared to abandon ship if it becomes necessary
- Ensure that all crew are prepared to assist as needed
- Alert the Coast Guard of the situation
- Determine if it is safe to enter the flooded compartment and attempt damage control
- If so, trace the source of the flooding

TABLE OF FLOODING RATES (Gallons Per Minute)

Distance below waterline	Diameter of Opening in Hull (Inches)							
	1"	1.5"	2"	2.5"	3"	3.5"	4"	6"
1'	20	44	79	123	177	241	314	707
2'	28	62	111	174	250	340	444	1000
3'	34	77	136	213	306	417	544	1,224
4'	39	88	157	245	353	481	628	1,414
5'	44	99	176	274	395	538	702	1,581
6'	48	108	192	301	433	589	770	1,731
7'	52	117	208	325	468	636	831	1,870
8'	56	125	222	347	500	680	889	1,999
9'	59	133	236	368	530	722	942	2,121
10'	62	140	248	388	559	761	993	2,235

CONTROL THE FLOODING

- If possible, isolate flooding by closing watertight doors and hatches
- Shut down generator and inverters to reduce electrocution risk
- Disengage machinery that may make working in flooding area hazardous
- Jam materials into the breach to slow the flow of water
- Wrap cloth or other material around wedges and plugs for a tight fit



- Bolster patches or plugs with shoring or nail-on patching
- Lay a tarp against outside hull and secure over the breach
- Use pumps to remove as much incoming water as possible
- Water may come from more than one source. Identify and stop all sources of flooding
- Remember to give the Coast Guard regular updates as the situation progresses
- Close off above-the-waterline holes, such as drains and discharges that can siphon water into the boat should it sink below their levels
- Ensure that patches are secure before attempting to get underway
- If grounded, ensure hull is watertight before refloating
- Maintain a watch at the source(s) of the flooding