

# THUNDERCAT INFLATABLES





## Owner's Manual Set out to comply with ISO 6185-3 :2014

THUNDERCAT Gen III SURF RESCUE CRAFT DESIGNED AND DEVELOPED BY THUNDERCAT INFLATABLES, GOLD COAST QUEENSLAND. ESPECIALLY FOR SURF LIFE SAVING AUSTRALIA. MANUFACTURED TO AUSTRALIAN SLSA SPECIFICATION CLASS 1 CONSTRUCTION MEETS ISO 6185-3:2014 INFLATABLE BOAT STANDARDS  
PCP TYPE 5: SAI GLOBAL PRODUCT CERTIFICATION STANDARDS MARK

Thundercat Gen III IRB Specifications Copyright: Thundercat Inflatables 2015

<b>Overall Length</b>	3850 mm	Recommended Power 25 hp or 30 (2 cylinder/short shaft/l carb)		
<b>Overall Beam</b>	1700 mm	Load v Speed 25 hp	5 persons	32 kph approx.
<b>Internal Length</b>	2750 mm		3 persons	35 kph approx.
<b>Internal Beam</b>	770 mm		2 persons	38 kph approx.
<b>Pontoon Diameter</b>	465 mm	Spray Dodger to Transom		2100 mm
<b>Compartments</b>	3+1	Hog Rails		2440 mm
<b>Weight</b>	Hull	46kg		Maximum Load 6 persons
	Floor	23kg		Assembly Time 8 minutes

### GENERAL DESCRIPTION

Fast, light, maneuverable, surf rescue craft, suitable for extreme conditions with an experienced crew of two.

### WARRANTY

- Surf Life Saving Queensland trading as Thundercat Inflatables (**Manufacturer**) warrants to the purchaser (**Purchaser**) that each new boat manufactured by Manufacturer shall be free from defects in material and workmanship under normal use and service for a period of:
  - 5 years for Fabric and seams; and
  - 12 months for transom, floorboard, and ancillaries from the date of delivery to Purchaser, subject to the terms and conditions below.
- The warranty in clause 1 above applies only to structural components of the hull and deck of the boat. Non-structural parts, components, and accessories, including but not limited to engines, electronics, pumps, and other equipment, are covered by the warranty provided by their respective manufacturers, if applicable.
- The warranty in clause 1 above does not cover:
  - Normal wear and tear, including cosmetic issues such as fading, discoloration or cracking.
  - Disrepair or damage caused by misuse, abuse, neglect, or improper use, storage or maintenance.
  - Modifications, alterations, or repairs not authorised by Manufacturer.
  - Damage resulting from accidents or collisions.
  - Damage caused by improper installation or operation of any part or accessory not provided by the Manufacturer.
- Customer Responsibilities:

To maintain the validity of this warranty, the Purchaser must:

  - Follow all maintenance and care instructions as outlined in this manual.



- Notify the Manufacturer in writing of any warranty claim within thirty (30) days of discovering the defect.

#### 4.2 Warranty Claim Process:

If you experience an issue covered under this warranty, follow these steps:

Contact Manufacturer at Thundercat Inflatables [info@thundercatinflatables.com.au](mailto:info@thundercatinflatables.com.au) with the following details:

- Proof of Purchase
  - Description of the Issue, Including photos or Videos if applicable
  - Provide the HIN Number located on the Starboard side on the rear of the Transom
  - Make the boat available to the Manufacturer for inspection and any necessary repairs.
5. Remedies - Manufacturer's sole obligation under this warranty is to repair or replace, at its discretion, any defective parts covered under this warranty. Manufacturer is and shall not be liable for any indirect, incidental, or consequential damages, including but not limited to loss of use, towing and/or Freight expenses, or loss of time.
6. This warranty is transferable to a subsequent purchaser within the relevant warranty period under clause 1, provided that Manufacturer is notified in writing of the transfer within thirty (30) days of the sale, and the boat has been maintained in accordance with Manufacturer's maintenance guidelines.
7. Except for the express warranty provided herein, the Manufacturer disclaims all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose. No dealer, distributor or other person has the authority to modify or expand the warranty provided herein.

## CONSTRUCTION MATERIALS

**HULL** 1100 Dtex CSPE Red/Yellow Orca fabric: approx. weight 1100g/lm2 Pennel Flipo - Orca.

**VALVES** Halkey-Roberts flush mounted marine valves.

**FLOOR** GRP laminate, 30mm foam core, all edges protected with a fabric wear strip

**FLOOR-MAT** EVA: Red or Yellow surf grip EVA 160 x 12mm

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Manufactured in Australia.





## **IRB STANDARD EQUIPMENT AND FITTINGS**

Pump, repair kit, Pressure gauge, Knife, Paddles, Motor safety cable, 2 towing eyes, 2 auto bailers, 2 bailers' awl, Adjustable aluminum engine clamp bracket, Re-righting rope and pouch, Anti-hog rail and safety lines, 6 external molded Urethane lifting handles, 1 bow lifting handle, 4 internal crew handles, 3 fuel line retaining loops, Paddle holders and ties, Rescue tube holders. Velcro fixings, Bowman's rope and handle attached to 50mm D-ring, 4 Adjustable foot straps, 4 fuel cell spliced clips, Surf Rescue signage, Underside wear strips, Crew and driver chafing patches.

## **1. GENERAL NOTES**

### **1.1 About This Manual**

This manual has been compiled to help you to operate your craft with safety and pleasure. It contains details of the craft, the equipment supplied or fitted, its systems and information on their operation. Please read it carefully and familiarise yourself with the craft before using it. This manual is designed to comply with the Recreational Craft Directive and should not be perceived as an exhaustive guide to the vessel.

### **1.2 Boat Seaworthiness & Crew ability**

Regardless of the craft's seaworthiness and its certified RCD design category, protection from freak sea and wind conditions cannot be guaranteed. The ability, experience and fitness of the crew, therefore, should be taken into consideration before making any voyage.

As a minimum, ensure that the anticipated wind and sea conditions will correspond to the design category of your boat and that you and your crew are able to handle the boat in these conditions.

All crew should receive suitable training, particularly with regards to location and operation of safety equipment. In some countries a driving license or authorisation are required, or specific usage regulations are in force. Check before making any voyages.

### **1.3 Maintenance & Repairs**

Always use trained and competent people for maintenance, Repairs or modifications. Modifications that may affect the safety characteristics of the craft shall be assessed, executed and documented by competent people. The boatbuilder cannot be held responsible for modifications he has not approved.

Please note that any change in the disposition of the masses aboard may significantly affect the stability, trim and performance of your boat.

### **1.4 Explanation of Symbols & Labels**

The following descriptions are used in this manual

#### **Danger**

Denotes an extreme intrinsic hazard exists which would result in high probability of death or irreparable injury if proper precautions are not taken.

#### **Warning**

Denotes a hazard exists which can result in injury or death if proper precautions are not taken



## ASSEMBLY

Unroll the boat onto a flat soft area (i.e. grass) large enough to allow assembly.

## GRP LAMINATE FLOOR INSTALLATION

Insert floor working rear section towards transom and bow board towards bow. Push down at center hinge and pull boat fabric out until floor fits snugly with floor gussets visible around floor edges.

## INFLATING

Connect pump to Rear chambers first and inflate to working pressure 4.5 psi, Hold the pressure gauge on one side chamber and inflate bow chamber until pressure gauge reading begins to rise. This will ensure equal pressure in all three chambers 4.5 psi. Finally inflate keel chamber to 4.5 psi

**NOTE:** ALWAYS lift one pontoon up a little to remove the boat's weight from the keel valve or put a few pumps into it once the floor is fitted.

**IMPORTANT** - Valve caps must be inserted into the valves for an airtight seal of the craft buoyancy tubes.

## IRB OVER PRESSURE WARNING TO IRB OFFICERS

Inflation pressures over the maximum allowable will cause fabric stretch and failure if not checked with a gauge when first inflating the craft and thereafter at regular intervals whilst the craft is beached.

## PRESSURE GAUGES

All pressure gauges supplied have a Black line on the dial.

The craft's MAXIMUM working pressure will be reached at the Black line i.e. 4.5 psi

If the pressure in the hull increases and the gauge reading goes beyond the Black line PRESSURE MUST BE RELEASED FROM EACH CHAMBER to return to the marked Black line / 4.5psi.

The time between pressure checks with the gauge will depend on several conditions. We recommend a check at hourly intervals:

- (a) While the atmospheric temperature is RISING
- (b) Wind has DROPPED
- (c) After the craft has been removed from the water

**NOTE:** The Pump can deliver up to 10psi, and over inflation of chambers could result if a pressure gauge is not used or is defective.



## ESSENTIAL HABITS THAT WILL EXTEND THE LIFE OF YOUR IRB

1. Pick a soft area to inflate the craft i.e. grass
2. Support one side of the craft until you can get a few pumps into the keelson
3. Do not over inflate Pontoons over 4.5 psi and 4.5psi for the keelson. Check this pressure when the craft is subject to temperature variations as the pressure varies also i.e. 3.5 psi at 10° = 7 psi at 20°. If left at this pressure the boat will permanently distort (hogging).
4. Reduce pressure to 0.5 psi when not in use, beware to not compress the transom flanges at low pressures.
5. Do **Not** transport the craft in a deflated or under pressure condition. Either put it on a roof rack or trailer or disassemble
6. Do **Not** Strap over transom flanges
7. Do **Not** Sit or Stand on the Transom Flanges
8. Do **Not** transport upside down
9. Avoid stacking the Craft
10. Never walk or drive over a deflated craft
11. Wash out with fresh water regularly removing floor if necessary to flush out shells or sand etc.
12. Apply AMORALL UV Protection to fabric at least twice a year to keep fabric in top condition.
13. Good craft housekeeping will lengthen the life of your boat.

## SUPPLEMENTARY CHECKS FOR IRB's

After 20 hours of operational use or after severe conditions have been encountered, deflate the craft removing floorboards and reinflate craft without them, also put a few pumps into the keel.

Thoroughly wash with fresh water, removing all sand, if fuel has been spilt remove with a soap solution or other biological cleaners. If a leak is suspected in a tube, find it by wiping it over with the soap solution and mark it for repair.

Clean the floorboards also and check for cracks or excessive wear. Investigate excessive wear and repair if possible. Any cracked components must be Repaired or replaced immediately. Retighten any screws on the main floor panel and transom.

When the craft is dry go over it thoroughly checking all fixings for security or lifting and for abrasion especially the floor panels and pontoons and Transom. If any white material weave is showing along this area, the craft must be put out of service and repaired.

**NOTE:** *Underside wear strips must be checked regularly. Ignore this wear and the whole floor panel may have to be removed for replacement.*

*If you have found a leak in the pontoons deflate and repair with a suitable patch from the repair kit.*

*For abrasion the repair can be carried out with the pontoons inflated to working pressure.*

*Remember to leave 24 hours for glue to cure.*

*Sprinkle talcum powder around floor tubes and Floorboards before assembling.*

## WARNING

REGULARLY check your engine and fuel bladder tanks for leaks or damage. Spilt fuel can cause delaminating of fabric, and the surf grip of the floor will absorb Fuel which effectively removes the anti-skid. THIS IS ALSO A SERIOUS FIRE RISK.



## **IRB SERVICE CHECK (Every 12 Months)**

### **PREPARATION**

Inflate craft to working pressure 4.5 psi. Inflate keelson.

Remove all sand and oil with soapy water and check the hull and keelson for leaks. If severe repair before leak check. Stand craft up on its end cones and hose out with fresh water and allow to dry.

### **LEAK CHECK**

Craft in horizontal position away from sunlight, air conditioning ducts etc. Inflate side pontoons to 4.5psi and bow chamber to 4.5 psi, also keelson to 4.5 psi. **NOTE AIR TEMPERATURE IN WORKSHOP.** Recheck pressure approximately 24 hours later and allow for any temperature variation.

Maximum allowable leak - 0.45 psi in any one chamber over a 24-hour period at a constant temperature.

### **REPAIRS**

Repair leaks as required to meet the above leak figure. See the attachment for Hypalon Repair kit instructions

### **FINAL CHECK**

Inflate craft with floorboards in to check fit and fabric floor tension.

### **PUMP**

Check general condition and air holding repair or replace as required.

### **PRESSURE GAUGE**

Visually check for damage. Compare reading against master gauge

### **REPAIR KIT**

Replace patches, glue, wet and dry as required.

### **GENERAL**

Trim off all loose fabric strands *carefully* with scissors



### **Caution**

Always maintain your boat properly and make allowances for the deterioration that will occur over time and as a result of heavy use or misuse of the boat.

Any boat, no matter how strong it may be, can be severely damaged by misuse.

Stability can be adversely affected by sloshing fluid. If the boat becomes swamped, do not undertake high speed maneuvers until the water has been cleared.

Breaking waves are a serious stability hazard.

### **Warning**

This craft can operate at high speed and with great acceleration. All crew should be seated in the correct position and holding the inboard crew handles or safety lines always provided when underway. Accelerating or turning with crew standing is very likely to result in man-overboard.

### **Information**

In the event of a member of the crew falling overboard they can board unassisted by using side safety lines.





## Hypalon (ORCA) Repair Instructions

- Check that your Glue is useable (runs freely, has not gone to jelly)
- Use only 2402 or 2405 Bostik.
- Select a patch (or make) that will overlap tear by 25mm
- Lightly sand patch and matching area to be repaired until an even dull matt finish is achieved
- Clean off dust from the patch and the repair area with a clean cloth.
- Place a flat, smooth surface under the area you are working on, ie: ½ inch plywood that is flat and smooth.
- Apply a light coat of glue (1st Coat) to patch and repair area.
- Leave for 10 minutes and re- apply (2nd thin coat) with a brush or plastic glue scraper.
- Leave for 2 -5 minutes, touch the glue patch with finger, if you can lift the patch with your finger, ie: the glue is not too wet or too dry. This is the time to press the patch onto the repair area. Do not trap any air bubbles. Rub from the center outwards.
- Roll over the patch, pressing down on the flat/plywood surface underneath to apply high contact pressure. Clean off excess glue around the patch.
- Patch should be left for 24 hours before using, to gain full adhesion strength.
- inflate your boat to the correct pressure.
- Spray the repaired area with soapy water to ensure no leaks

## 2. RISK OF FLOODING

### Through Hull Fittings

There are four through-hull auto bailers in this craft, as described below.

Opening/Fitting	Location	Recommended position	Condition
2 x Automatic bailers	Below waterline on transom	Automatic	Automatic
2 x Self-bailing	Above waterline on transom	Self-bailing	Self-bailing

## 3. RISK OF FIRE

### ALWAYS.....

- keep the floor clean and check for fuel spills regularly
- take care not to damage fuel lines
- check condition of fuel lines regularly

### NEVER.....

- use naked flame in or near the craft
- modify craft's systems (especially fuel)
- fill any fuel tank whilst machinery is running
- smoke while handling fuel

## 4. SAFE OPERATION OF SYSTEMS

### NEVER.....

- modify the craft's Design, Systems or Installations
- Installation, alterations and maintenance should be performed by a competent marine technician.



## 5. SAFE OPERATION OF FUEL SYSTEM

The locations of the fuel system components are as follows:

Item	Location
Portable Fuel Tank	In bow section
Shut Off Valve	Spring loaded valve on tank outlet tube to engine, closes when disconnecting from engine.
Filler Point	Directly on the tank.

### Caution

To avoid fuel spillage on the deck, it is recommended that the fuel tank is removed from the craft when refueling.

### Warning

Do not smoke or use an open flame when filling with fuel, or when the fuel tank cap is removed.

### Information

Inspect the fuel system for leakage before each use. Hoses in the fuel system must be inspected before each use, and replaced if any deterioration is found.

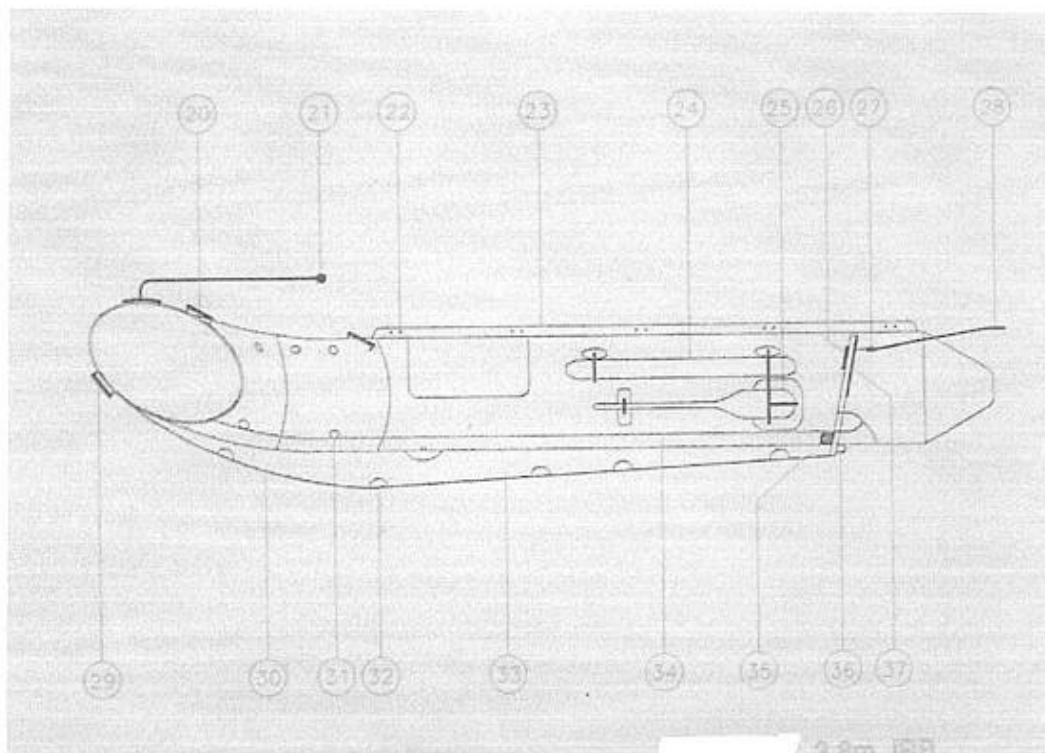
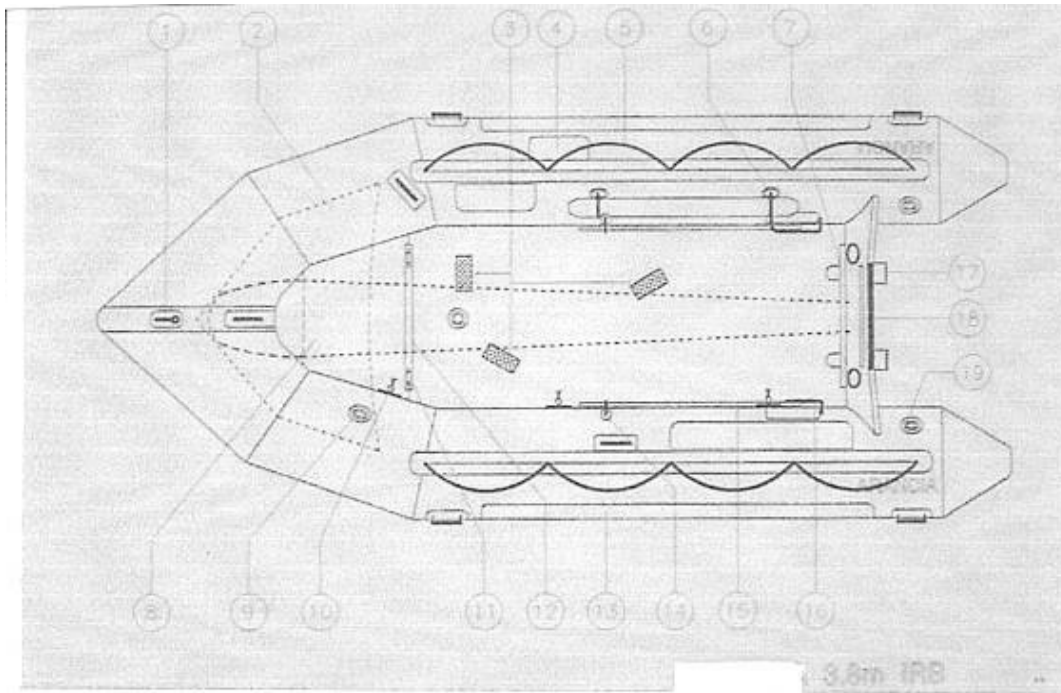
### Warning

Never use an open flame to check for fuel leaks.

### Warning

If leakage is present, disconnect the fuel hose and have the system repaired before further use. System repairs should be done by a qualified person.

# DRAWINGS





## PARTS LIST

1.	Crewman's D ring Patch	
2.	Bow Dodger	
3.	Crewman's foot strap, padding and barrel knots	
4.	Roll-over pouch, rope and two handles	
5.	Anti-hog safety line	
6.	Rescue tube fixings (removable Velcro)	
7.	Floor thrust piece	
8.	Bow board	
9.	Inflation valve	
10.	Fuel Line Loops/Ties	
11.	Main Floor Panel Hinge	
12.	Main Floor Assembly Complete	
13.	Surf Rescue Signage	
14.	Paddle Ties	
15.	Paddles - pair	
16.	Driver and Crew Patches	
17.	Self-Bailer Scupper	
18.	Adjustable Aluminium Engine Clamp Plate complete	
19.	Inflation Valve Complete	
20.	Crew Handles	
21.	Crewman's Rope & Handle	
22.	Safety Rope Eyelets	
23.	Safety Rail (anti-hog)	
24.	Rescue Tube	
25.	Paddle Fixing	
26.	Aluminium Clamp Plate	
27.	Eye Bolts & Nuts	
28.	Engine Safety Cable	
29.	Urethane moulded handles - each	
30.	Keelson Neoprene Rubbing Strip	
31.	Accessory Baa Webbing Fixings (AUS specs)	
32.	Keelson Butterfly Patches	
33.	Keelson	
34.	Floor Fabric Wear Strips	
35.	Auto Bailers	





## THUNDERCAT INFLATABLES

### THE DIFFERENCES BETWEEN HYPALON (ORCA) AND PVC IN THE MANUFACTURE OF INFLATABLE BOATS

The coating applied to nylon or polyester fabric has a profound effect on the quality and durability i.e. long life and toughness of the boat Hypalon (ORCA) a synthetic rubber compound and lasts indefinitely. PVC is a less expensive plastic material with a much shorter life span.

#### MAIN FEATURES

**Hypalon (ORCA)** is unaffected by sunlight or UV

PVC is subject to continuous UV degeneration, and this can only be slowed by additives.

#### CHEMICALS

**Hypalon (ORCA)** is resistant to most chemicals including petroleum products.

PVC breaks down when contaminated with chemicals and petroleum, the signs of which are stiffening and cracking of the material leading to delamination.

#### CLEANING

**Hypalon (ORCA)** can be cleaned with soap and water or detergent.

PVC suffers from leaching of the plastisers causing deterioration and hardening as above.

#### AGEING

**Hypalon (ORCA)** after 20 years or more shows little sign of deterioration and has a projected life span of 30 years and more. It remains supple and can always be repaired.

PVC the older it gets the more brittle and stiffer it becomes - usually after 3-4 years. It is more difficult to repair and has a life expectancy of 5 to 10 years.

#### DELAMINATION

**Hypalon (ORCA)** is highly unlikely to suffer from delamination as the coatings are bonded onto the base fabric. PVC is coated onto the fabric backing and as it ages or where flexing takes place delamination occurs.

#### BONDING SEAM JOINS

**Hypalon (ORCA)** is bonded using a two-part adhesive and gains strength with age. The construction process is by hand and is therefore a more expensive and superior method.

PVC is normally welded by machines with the tendency to crack on the weld line, which is much weaker than those on Hypalon (ORCA) craft, especially as aging takes place.

## SUMMARY



**Hypalon (ORCA)** is a premium rubber compound that has a long-life span of up to 50 years during which time it remains soft and pliable and easily repaired in the event of damage. PVC - poly vinyl chloride developed as a solid plastic for commercial mouldings', tubing and sheet etc. and only by the addition of plasticisers, oils and grease can it be converted into softer pliable coatings suitable for tarpaulins, awnings and inflatable boat material. However, from the day it is produced exposure to air, let alone sun, oil, chemical contact, causes the plasticiser in the PVC coating to leach out, resulting in surface hardening and cracks appearing. PVC can also become powdery, greasy, or sticky as it ages, which makes repairs difficult to prevent and eventual delamination of the PVC coatings from the fabric. *How long before this occurs, any time after two years use!*

#### **HYPALON (ORCA)**

Hypalon (ORCA) is the only material that can offer a long trouble free lifespan combined with the knowledge that all Thundercat inflatable craft are made from this material. It also the safest and strongest there is available.



## **CONTACT US**

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## **OPENING HOURS**

Monday - Friday 6:30am -3:30pm