

Castrol ON Single Phase Immersion Cooling Fluids Site preparation



Safe storage and handling advice

This guide is intended to provide general advice for preparing your site to receive and store Castrol ON Immersion Cooling Fluids DC 15 and DC 20. This includes container dimensions and best practice guidance for handling fluids.

Prior to receiving the thermal management fluids, it is advised to prepare to handle the different pack sizes and weights. The use of a forklift is advisable. Larger quantities of 20 L packs or drums can be delivered on pallets.

It is advisable to have a spill kit available in case fluid is spilt during handling. Furthermore, studying the MSDS, TDS and all provided technical documentation is advised to prepare the necessary personal protective equipment (PPE).

Disposal of the fluid must comply with local laws.

If questions arise regarding safety, handling, disposal, recollection, or any other fluid-related eventuality, please contact your Castrol BP representative or at liquidcooling@bp.com.

Storage

All packages should be stored under cover. Where outside storage is unavoidable, drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should not be stored above 60°C, or exposed to hot sun or freezing conditions.

- **Store in a dry, cool and well-ventilated area.**
- **Keep away from heat and direct sunlight.**
- **Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage and/or contamination of the product from the environment.**
- **Avoid significant changes in temperature to prevent humidity ingress.**

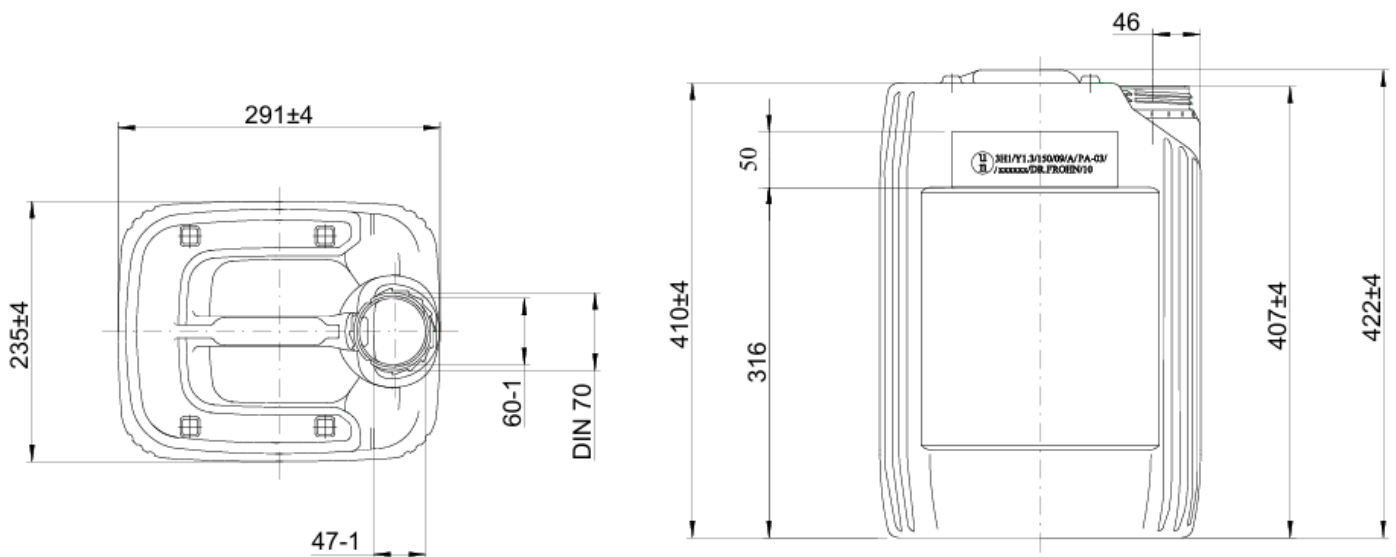
Packaging sizes of DC thermal management fluids

Castrol ON DC thermal management fluids come in different pack sizes

20 L Monty Pack:



20 L Monty Pack	L / mm / kg	gal US / in / lbs US
Nominal Capacity	20 L	5.3 gal US
Brimful Capacity	23.6 L	6.1 gal US
Length	295 mm	11.6 in
Width	235 mm	9.3 in
Height with Pallet	422 mm	16.6 in
Weight total approx. - empty	1 kg	2.1 lbs US

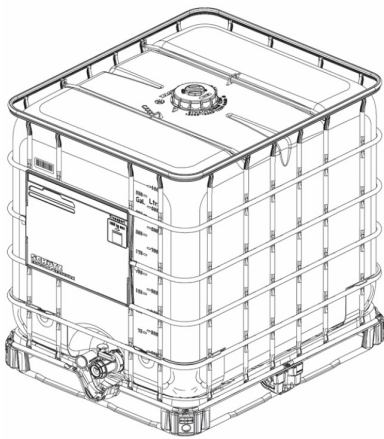


Notes:

- 200 L steel drum
- 1000 L IBC (intermediate bulk container)
- 1160 x 1000 x 1200 mm and a filled DC 20 IBC would be 797 kg

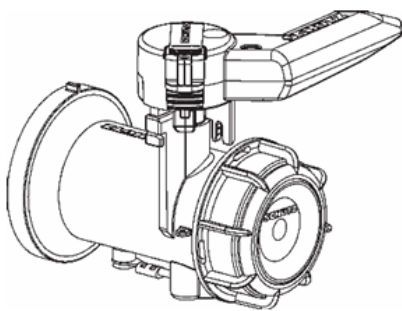
208 L Drum 884 x 585 mm Metal

208 L Drum 884 x 585 mm Metal	L / mm / kg	gal US / in / lbs US
Nominal Capacity	208 L	54.9 gal US
Brimful Capacity	216 L	57.1 gal US
Diameter (overall)	595 mm	23.4 in
Diameter (body)	571.5 mm	22.5 in
Height	882 mm	34.7 in
Weight total approx. - empty	1 kg	35.3 lbs US



1,000 L IBC 1,160 x 1,200 x 1,000 mm	L / mm / kg	gal US / in / lbs US
Nominal Capacity	1,000 L	275 gal US
Brimful Capacity	1,060 L	280 gal US
Length	1,200 mm	47.24 in
Width	1,000 mm	39.37 in
Height with Pallet	1,160 mm	45.67 in
Weight total approx. - empty	55 kg	120.9 lbs US

Discharge opening



Outlet valve	integr.butterfly-valve DN50/2"
Case	PE-HD
Connection thread	metric
Flap gasket / Ball gasket	PP
Handle color	blue, Handle protection
Screw cap	PE-HD
Screw cap gasket	PE, foamed
Screw cap color	black
Outlet nozzle	PE-HD

Weight and dimensions of full pallets of Castrol thermal management fluid

Dimensions and weight of a pallet that is fully packed with 20 L pails

800mm x 1,200mm x 950mm – approx.	480 KG/pallet
31.5 in x 47.3 in – approx.	1,060 lbs US /pallet

Dimensions and weight of a pallet that is fully packed with 208 L drums

1,200mm x 1,200mm x 1,030mm – approx.	770 KG/pallet
47.3 in x 47.3 in – approx.	1,700 lbs US /pallet

Fluid Handling Guidelines: Best Practices

- ✓ Always wear appropriate PPE
- ✗ Do not swallow
- ✗ Avoid inhaling vapour or mist
- ✗ Never syphon by mouth
- ✗ Do not eat or drink in area where dielectric fluids are handled
- ✗ Do not smoke / no open flames
- ✗ Avoid sparks / no ignition sources in vicinity of fluid
- ✓ Ensure appropriate fire extinguishers are available
- ✓ Wipe up any drips or fluid spill and immediately clean surface using degreaser
- ✓ Use absorbent pads rather than vermiculite or other absorbent material that may generate dust
- ✓ Ensure spill response kit is well stocked and readily available
- ✓ Create site spill response plan
- ✗ Avoid static charge build up, ensure proper grounding procedures followed during bulk fluid transfer
- ✓ Collect waste fluid in properly labelled waste container
- ✓ Dispose of waste liquid via licensed waste disposal contractor
- ✓ Follow appropriate waste container labelling and retention guidelines to ensure compliance
- ✗ Do not open doors / touch surfaces with a gloved hand
- ✓ If you cannot secure materials / supplies in one hand, use a cart to safely move through the facility

Spills

In the event of a spill, follow proper clean-up procedures and dispose of waste according to local regulations. Castrol Immersion Cooling Fluids are environmentally friendly, but proper handling and disposal are essential.

Use appropriate PPE.

Small spill / drips

- ✓ Wipe spill
- ✓ Clean residual oil using degreaser to reduce slip hazard
- ✓ Soak clean towel with degreaser rather than spraying surface

Large spill

- ✓ Erect signs around the spill area to alert colleagues of the slip hazard and reduce foot traffic
- ✓ Use absorbent booms or socks to prevent spill from spreading – especially important when spill is near floor drain
- ✓ If the area is properly ventilated, initiate clean-up
- ✓ Mop up bulk fluid using absorbent spill pad
- ✓ Absorbent materials like vermiculite or sand can generate dust and are not recommended
- ✓ Clean residual oil using degreaser
- ✓ Appropriately discard waste

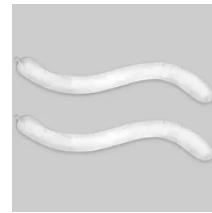
Spill Kits:



Sorbents



Booms



Socks



For any additional information or concerns, please contact your Castrol representative or reach out via email at liquidcooling@bp.com.



55 Gallon Drum Spill Kit



5 Gallon Drum Spill Kit

Abbreviations: IBC – Intermediate Bulk Container

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