

# FLO™ ZT

U.S. PATENT PENDING

DESCRIPTION	CONFORMITY	COMPATIBILITY
<p>FLO™ ZT is a precision cleaning solvent formulated for outstanding vapor degreasing characteristics. It maintains comparable properties to other solvents, which were widely used but have been phased out such as the low boiling point of MeCL and the high wetting index of HCFC-141b. Aside from its superior cleaning properties, FLO™ ZT has a very desirable environmental profile and has a permissive PEL.</p> <ul style="list-style-type: none"> <li>➤ <b>SNAP approved by the EPA.</b></li> <li>➤ <b>Non-flammable</b></li> <li>➤ <b>NO ozone depleting potential</b></li> <li>➤ <b>Very low GWP &lt; 35</b></li> </ul>	<p>FLO™ ZT has been designed to conform to the following specifications:</p> <ul style="list-style-type: none"> <li>• <b>AMS1562B</b> Aircraft exterior surfaces</li> <li>• <b>ARP 1755</b> Aircraft engine cleaning</li> <li>• <b>ASTM-F-945</b> Stress corrosion of Titanium alloys (aircraft engine).</li> <li>• <b>CSD#1</b> by Douglas Aircraft Company.</li> <li>• <b>Boeing D6-17487 Rev.N</b> Exterior and general cleaner.</li> <li>• <b>PWA 36604 Rev B</b> Hot corrosion testing of gas turbine alloys.</li> </ul>	<p>Various metals have been tested for compatibility with FLO™ ZT, in accordance with Mil-T-81533A. The metal corrosion test - 24 hours exposure to boiling solvent, has yielded no sign of corrosion on the following metals:</p> <ul style="list-style-type: none"> <li style="margin-right: 20px;">✓ <b>Aluminum</b></li> <li style="margin-right: 20px;">✓ <b>Brass</b></li> <li>✓ <b>Carbon steel</b></li> <li style="margin-right: 20px;">✓ <b>Copper</b></li> <li style="margin-right: 20px;">✓ <b>Inconel</b></li> <li>✓ <b>Magnesium</b></li> <li style="margin-right: 20px;">✓ <b>Monel</b></li> <li style="margin-right: 20px;">✓ <b>Zinc</b></li> <li>✓ <b>Titanium</b></li> <li>✓ <b>Stainless Steel</b></li> </ul>

APPLICATIONS	PHYSICAL PROPERTIES																																																																																																
<p>FLO™ ZT can be useful in various applications such as:</p> <ul style="list-style-type: none"> <li>✓ <b>Cleaner-Degreaser</b></li> <li>✓ <b>Printed Circuit Boards</b></li> <li>✓ <b>Flux removal</b></li> <li>✓ <b>Precision cleaning</b></li> <li>✓ <b>Metal cleaning</b></li> <li>✓ <b>Carbon removal</b></li> <li>✓ <b>Automotive parts cleaning</b></li> <li>✓ <b>Drying agent</b></li> </ul> <p>FLO™ ZT can be utilized in existing vapor degreasing equipment after some adjustments. Use it in place of MeCL, TCE, HCFC-141b and other cleaning solvents.</p>	<p>An evaluation and comparison between FLO™ ZT and other common solvents:</p> <table border="1"> <thead> <tr> <th></th> <th>FLO™ ZT</th> <th>Novec® 72DA</th> <th>Vertrel® SFR</th> <th>nPB</th> <th>HCFC- 141b</th> </tr> </thead> <tbody> <tr> <td>Boiling Point °C</td> <td><b>46.1</b></td> <td>44</td> <td>41</td> <td>70</td> <td>32</td> </tr> <tr> <td>Kauri Butanol Value</td> <td><b>106</b></td> <td>58</td> <td>101</td> <td>125</td> <td>56</td> </tr> <tr> <td>Wetting Index</td> <td><b>149</b></td> <td>176</td> <td>111</td> <td>106</td> <td>149</td> </tr> <tr> <td>Specific Gravity, 25°C</td> <td><b>1.28</b></td> <td>1.27</td> <td>1.28</td> <td>1.32</td> <td>1.24</td> </tr> <tr> <td>Viscosity, 25°C, cps</td> <td><b>0.31</b></td> <td>0.40</td> <td>0.58</td> <td>0.49</td> <td>0.43</td> </tr> <tr> <td>S. Tension dy/cm, 25°C</td> <td><b>27.7</b></td> <td>18</td> <td>19.9</td> <td>24.2</td> <td>19.3</td> </tr> <tr> <td>Vapor Pressure mmHg, 25°C</td> <td><b>377</b></td> <td>360</td> <td>434</td> <td>112</td> <td>518</td> </tr> <tr> <td>Specific Heat, 25°C</td> <td><b>N/A</b></td> <td>N/A</td> <td>N/A</td> <td>0.27</td> <td>---</td> </tr> <tr> <td>Latent Heat, cal/gm</td> <td><b>N/A</b></td> <td>N/A</td> <td>N/A</td> <td>58.8</td> <td>52.3</td> </tr> <tr> <td>Solubility in Water, w%</td> <td><b>N/A</b></td> <td>N/A</td> <td>N/A</td> <td>0.24</td> <td>0.18</td> </tr> <tr> <td>Flash Point, TCC</td> <td><b>None</b></td> <td>None</td> <td>None</td> <td>None</td> <td>None</td> </tr> <tr> <td>Flammability limits, v%</td> <td><b>N/A</b></td> <td>6-14.5</td> <td>7-15</td> <td>4-7.8</td> <td>7.6-17.7</td> </tr> <tr> <td>Half life in air</td> <td><b>5-12 days</b></td> <td>N/A</td> <td>N/A</td> <td>2 wks</td> <td>10 yrs</td> </tr> <tr> <td>ODP</td> <td><b>0</b></td> <td>0</td> <td>0</td> <td>0.01</td> <td>0.1</td> </tr> <tr> <td>PEL, ppm</td> <td><b>200*</b></td> <td>~200*</td> <td>187*</td> <td>25</td> <td>500</td> </tr> </tbody> </table>		FLO™ ZT	Novec® 72DA	Vertrel® SFR	nPB	HCFC- 141b	Boiling Point °C	<b>46.1</b>	44	41	70	32	Kauri Butanol Value	<b>106</b>	58	101	125	56	Wetting Index	<b>149</b>	176	111	106	149	Specific Gravity, 25°C	<b>1.28</b>	1.27	1.28	1.32	1.24	Viscosity, 25°C, cps	<b>0.31</b>	0.40	0.58	0.49	0.43	S. Tension dy/cm, 25°C	<b>27.7</b>	18	19.9	24.2	19.3	Vapor Pressure mmHg, 25°C	<b>377</b>	360	434	112	518	Specific Heat, 25°C	<b>N/A</b>	N/A	N/A	0.27	---	Latent Heat, cal/gm	<b>N/A</b>	N/A	N/A	58.8	52.3	Solubility in Water, w%	<b>N/A</b>	N/A	N/A	0.24	0.18	Flash Point, TCC	<b>None</b>	None	None	None	None	Flammability limits, v%	<b>N/A</b>	6-14.5	7-15	4-7.8	7.6-17.7	Half life in air	<b>5-12 days</b>	N/A	N/A	2 wks	10 yrs	ODP	<b>0</b>	0	0	0.01	0.1	PEL, ppm	<b>200*</b>	~200*	187*	25	500
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\*(mfg recommended), based on study by independent sources.

# TECHNICAL DATA SHEET

## SAFETY

- FLO™ ZT is not a reportable chemical under SARA 313.
- FLO™ ZT is not regulated as a hazardous waste under RCRA.
- FLO™ ZT is not regulated as a hazardous air pollutant under NESHAP.
- FLO™ ZT is still considered a VOC and must be used reported according to local regulations.

For complete safety information, please refer to FLO™ ZT Safety Data Sheet.

## PACKAGING

FLO™ ZT is available in 550 Lb. drums and 50 Lb. pails.

Smaller size packaging available upon request.

The product should be stored in the original containers in a cool, dry and ventilated place. Do not expose to temperatures higher than 120°F.

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