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|--|--------------------|----------------------------|---------------------|------------|
|  <b>synerzine</b> <sup>TM</sup> | <b>Title:</b>      | T939 Product Specification |                     |            |
|  | <b>Document #:</b> | 02-1006                    | <b>Rev #:</b>       | 000        |
|  | <b>Status:</b>     | ACTIVE                     | <b>Date Issued:</b> | 06/21/2013 |

**Product Identifiers**

|                  |                                  |       |            |        |    |
|------------------|----------------------------------|-------|------------|--------|----|
| Product Name:    | 4,5-DIMETHYL-2-ISOBUTYL THIAZOLE |       |            |        |    |
| Synerzine Item # | <b>T939</b>                      | CAS # | 53498-32-1 | FEMA # | NA |

**Material Properties**

|                   |         |                      |                    |
|-------------------|---------|----------------------|--------------------|
| Molecular Formula | C9H15NS | Flash Point (°F, CC) | 167                |
| Molecular Weight  | 169.25  | Boiling Point        | 194°F ( @ 12mmHg ) |
| Shelf Life (days) | 730     | Physical State       | Liquid             |

|                       |  |
|-----------------------|--|
| Solubility            | Slightly in water; soluble in organic solvents.  |
| Storage and Stability | Store in fully closed container in cool (~20°C) dry place. Stable for years, with slight development of discoloration. |
| Handling Precautions  | Avoid contact of eyes and skin. In case of contact, flush copiously with water. Keep away from heat and flame.         |

**Specified Critical Limits**

| Critical Property | Test Method             | UOM                      | Lower Limit      | Upper Limit |
|-------------------|-------------------------|--------------------------|------------------|-------------|
| Color             | Visual Analysis         | None                     | Water-white      | Pale yellow |
| Odor              | Organoleptic Analysis   | None                     | Strong vegetable |             |
| Chemical Purity   | Gas Chromatography      | %                        | 96.0%            | 100.0%      |
| Density           | Density Analysis        | g/cm <sup>3</sup> @ 20°C | 0.967            | 0.977       |
| Refractive Index  | Refractometric Analysis | nD20                     | 1.493            | 1.498       |

**Notes**

*This specification was generated electronically, and is therefore unsigned.*