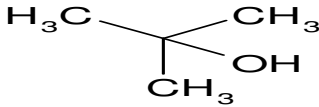




Product Specification

|                                                                                   |                                                                         |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| E Control                                                                         | QC2\DATAD\D:\PS\20878XPS.xls                                            |
| PRODUCT CODE                                                                      | 20878                                                                   |
| PRODUCT NAME                                                                      | 2-METHYLPROPAN-2-OL DRY AR (H <sub>2</sub> O ≤ 0.02%)                   |
| SYNONYMS                                                                          | tert-butyl alcohol                                                      |
| C.I. NO.                                                                          | N/A                                                                     |
| CASR NO.                                                                          | 75-65-0                                                                 |
| ATOMIC OR MOLECULAR FORMULA                                                       | C <sub>4</sub> H <sub>10</sub> O                                        |
| ATOMIC OR MOLECULAR WEIGHT                                                        | 74.12                                                                   |
| PROPERTIES                                                                        |                                                                         |
|  |                                                                         |
| PARAMETER                                                                         | LIMIT                                                                   |
| Description                                                                       | A clear liquid, not more than 10 Hazen units in colour.                 |
| Solubility                                                                        | Miscible with water and methanol forming clear and colourless solution. |
| Minimum assay (By GC)                                                             | 99.0%                                                                   |
| Wt.per ml at 30 °C                                                                | About 0.775 g                                                           |
| Boiling Range (82- 83 °C)                                                         | Min. 95.0%                                                              |
| Freezing Point                                                                    | Not less than 25 °C                                                     |
| Refractive Index(n) <sub>D</sub> <sup>20</sup>                                    | 1.384 - 1.386                                                           |
| MAXIMUM LIMIT OF IMPURITIES                                                       |                                                                         |
| Water                                                                             | 0.02%                                                                   |
| Acidity (CH <sub>3</sub> COOH)                                                    | 0.003%                                                                  |
| Non volatile matter                                                               | 0.001%                                                                  |
| Aldehydes & Ketones (C <sub>3</sub> H <sub>7</sub> CHO)                           | 0.01%                                                                   |
| Butan-2-ol (C <sub>4</sub> H <sub>9</sub> OH)                                     | 0.2%                                                                    |
| Copper (Cu)                                                                       | 0.00005%                                                                |
| Iron (Fe)                                                                         | 0.00005%                                                                |
| Lead (Pb)                                                                         | 0.00005%                                                                |
| Note(s) : Assay (if applicable) method mentioned.                                 |                                                                         |

**DANGER**

**HAZARD STATEMENTS** : May cause drowsiness and dizziness. Highly flammable liquid and vapour. Harmful if inhaled. Harmful if swallowed. Causes mild skin irritation. May cause allergic skin reaction. May damage the unborn child.

**PRECAUTIONARY STATEMENTS** :

**Prevention** : Ground/bond container and receiving equipment. Do not eat, drink or smoke when using this product. Contaminated clothing should not be allowed out of the workplace. Use only outdoors or in a well ventilated area. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash hands thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapours/spray. Use personal protective equipment as required. Keep container tightly closed. Keep away from heat/sparks/open flame - No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Wear protective gloves and eye/face protection. Use explosion-proof electrical/ventilating/lighting/equipment.

IMDG Code : 3/II  
UN No. : 1120 IATA  
: 3

**Response** : Wash contaminated clothing before reuse. If skin irritation or rash occurs, seek medical advice/attention. If skin irritation occurs, seek medical advice/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. In case of fire, use alcohol-type foam for extinction. If on skin or hair: remove/take off immediately all contaminated clothing. Rinse with water/shower. If exposed or concerned: Get medical attention advice. Specific treatment: refer to Label or MSDS. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell.

**Disposal** : Allow to evaporate in safe open area (applicable for small quantities). The chemical should be burnt in a chemical incinerator equipped with burner and scrubber. If the volumes are larger than 500ml and no incinerator and site of evaporation is not available then transfer the waste chemical to waste solvent drum for collection by specialist disposal company.

Hazard pictogram (s) :



**Skin irritation Flammable liquids Aspiration hazard**

|                             |                            |                               |                           |
|-----------------------------|----------------------------|-------------------------------|---------------------------|
| Prepared By : DINESH        | Checked By: RAJU VYAS      | Approved By: S.S.TOLIA        | Issue Date : 11/02/2002   |
| Name/Dept. : Officer (Q.A.) | Name/Dept. :Incharge(Q.A.) | Name/Dept. : Incharge (Tech.) | Revision No. : 01         |
| Sign. :                     | Sign. :                    | Sign. :                       | Revision dt. : 16/08/2010 |
| Date : 14/08/2010           | Date : 14/08/2010          | Date : 16/08/2010             | AMEND NO. : P062          |