

SRF Limited
Fluorochemicals Business, Dahej

Finished Product Specification

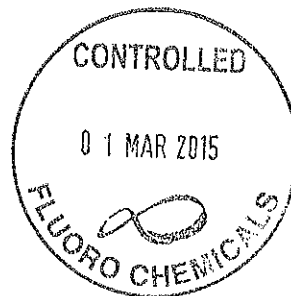
| | | | | | |
|------------------|--|----------|---------------|----------|-----------------------|
| Title | Dilute Hydrofluoric acid - 20 % (P) | | | DC No. | QA/ ANS/ FP/ DHF 20 P |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | 01.03.15 | |
| Issue No. | 1 | | Revision No. | 0 | |

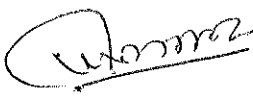
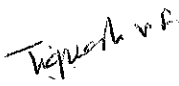


| S. No. | Characteristics | Unit | Specification |
|--------|---|------|------------------------|
| 1 | Appearance | - | Clear Colorless liquid |
| 2 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 20.0 |
| 3 | Chloride as Cl ⁻ , w/w, <i>Maximum</i> | ppm | 1000 |

Reference: Inhouse specification

Abbreviations:

- DC No. Document Control Number
- QA Quality Assurance
- ANS Analytical Specifications
- FP Finished product
- w/w weight by weight



| | | | |
|---|---|--|---|
| Prepared by | Checked by | Accepted by | Approved by |
|  |  |  |  |
| Manager - QA | Head - TAG & QA | Production Head - P1 Plant | SVP & HOW |



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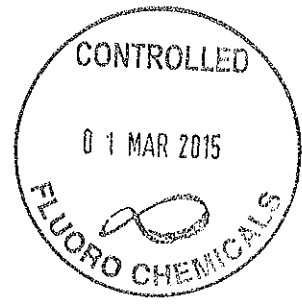
| | | | | | |
|------------------|--|----------|---------------|----------|-----------------------|
| Title | Dilute Hydrofluoric acid - 30 % (P) | | | DC No. | QA/ ANS/ FP/ DHF 30 P |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | 01.03.15 | |
| Issue No. | 1 | | Revision No. | 0 | |

| S. No. | Characteristics | Unit | Specification |
|--------|--|------|------------------------|
| 1 | Appearance | - | Clear Colorless liquid |
| 2 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 30.0 |
| 3 | Chloride as Cl, w/w, <i>Maximum</i> | ppm | 1000 |

Reference: Inhouse specification

Abbreviations:

- DC No. Document Control Number
- QA Quality Assurance
- ANS Analytical Specifications
- FP Finished product
- w/w weight by weight



| | | | |
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|------------------|-------------------------------------|----------|---------------|---------|-----------------------|
| Title | Dilute Hydrofluoric acid - 40 % (P) | | | DC No. | QA/ ANS/ FP/ DHF 40 P |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | | 01.03.15 |
| Issue No. | 1 | | Revision No. | | 0 |

| S. No. | Characteristics | Unit | Specification |
|--------|---|------|------------------------|
| 1 | Appearance | - | Clear Colorless liquid |
| 2 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 40.0 |
| 3 | Chloride as Cl ⁻ , w/w, <i>Maximum</i> | ppm | 1000 |

Reference: Inhouse specification

Abbreviations:

DC No. Document Control Number
QA Quality Assurance
ANS Analytical Specifications
FP Finished product

w/w weight by weight



| | | | |
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Finished Product Specification

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|------------------|-------------------------------------|----------|---------------|---------|-----------------------|
| Title | Dilute Hydrofluoric acid - 50 % (P) | | | DC No. | QA/ ANS/ FP/ DHF 50 P |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | | 01.03.15 |
| Issue No. | 1 | | Revision No. | | 0 |

| S. No. | Characteristics | Unit | Specification |
|--------|--|------|------------------------|
| 1 | Appearance | - | Clear Colorless liquid |
| 2 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 50.0 |
| 3 | Chloride as Cl, w/w, <i>Maximum</i> | ppm | 1000 |
| 4 | Sulphate as H ₂ SO ₄ , w/w, <i>Maximum</i> | ppm | 200 |

Reference: Inhouse specification

Abbreviations:

DC No. Document Control Number
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FP Finished product
w/w weight by weight



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Finished Product Specification

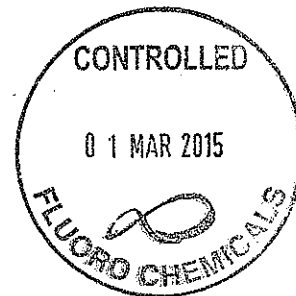
| | | | | | |
|------------------|-------------------------------------|----------|---------------|----------|---------------------|
| Title | Dilute Hydrofluoric acid - 60 % (P) | | | DC No. | QA/ ANS/ FP/ DHF 60 |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | 01.03.15 | |
| Issue No. | 1 | | Revision No. | 0 | |

| S. No. | Characteristics | Unit | Specification |
|--------|--|------|------------------------|
| 1 | Appearance | - | Clear Colorless liquid |
| 2 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 60.0 |
| 3 | Chloride as Cl, w/w, <i>Maximum</i> | ppm | 1200 |
| 4 | Sulphate as H ₂ SO ₄ , w/w, <i>Maximum</i> | ppm | 240 |

Reference: Inhouse specification

Abbreviations:

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- FP Finished product
- w/w weight by weight



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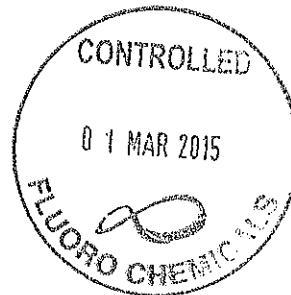
| | | | | | |
|------------------|--|----------|---------------|----------|-------------------------|
| Title | Dilute Hydrofluoric acid - 70 % (P) | | | DC No. | QA/ ANS/ FP/ DHF 70 (P) |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | 01.03.15 | |
| Issue No. | 1 | | Revision No. | 0 | |

| S. No. | Characteristics | Unit | Specification |
|--------|--|------|------------------------|
| 1 | Appearance | - | Clear Colorless liquid |
| 2 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 70.0 |
| 3 | Chloride as Cl ⁻ , w/w, <i>Maximum</i> | ppm | 1400 |
| 4 | Sulphate as H ₂ SO ₄ , w/w, <i>Maximum</i> | ppm | 280 |

Reference: Inhouse specification

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- w/w weight by weight



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By Product - Analytical Specification

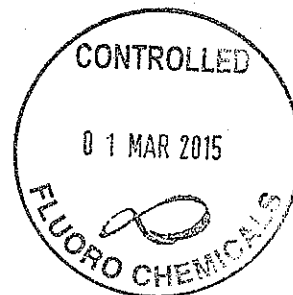
| | | | | | |
|------------------|---------------------------------|----------|---------------|----------|---------------------|
| Title | Dilute Hydrofluoric acid - 20 % | | | DC No. | QA/ ANS/ BP/ DHF 20 |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | 01.03.15 | |
| Issue No. | 1 | | Revision No. | 0 | |

| S. No. | Characteristics | Unit | Specification |
|--------|---|------|---------------|
| 1 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 20.0 |
| 2 | Chloride as Cl ⁻ , w/w, <i>Maximum</i> | ppm | 1000 |

Reference: Inhouse specification

Abbreviations:

DC No. Document Control Number
 QA Quality Assurance
 ANS Analytical Specifications
 w/w weight by weight



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|--------------|-----------------|----------------------------|-------------|
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| | | | |
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By Product - Analytical Specification

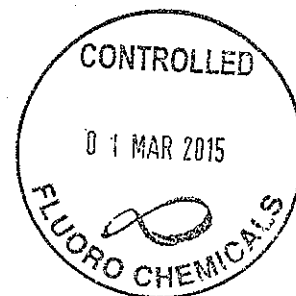
| | | | | | |
|------------------|---------------------------------|----------|---------------|---------|---------------------|
| Title | Dilute Hydrofluoric acid - 30 % | | | DC No. | QA/ ANS/ BP/ DHF 30 |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | | 01.03.15 |
| Issue No. | 1 | | Revision No. | | 0 |

| S. No. | Characteristics | Unit | Specification |
|--------|---|------|---------------|
| 1 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 30.0 |
| 2 | Chloride as Cl ⁻ , w/w, <i>Maximum</i> | ppm | 1000 |

Reference: Inhouse specification

Abbreviations:

DC No. Document Control Number
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w/w weight by weight



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By Product - Analytical Specification

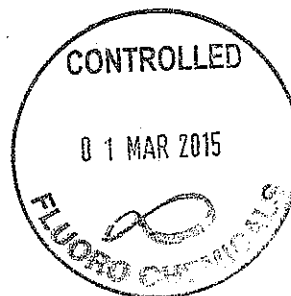
| | | | | | |
|------------------|---------------------------------|----------|---------------|----------|---------------------|
| Title | Dilute Hydrofluoric acid - 40 % | | | DC No. | QA/ ANS/ BP/ DHF 40 |
| Chemical formula | HF | Mol. Wt. | 20.01 | CAS No. | 7664-39-3 |
| Issue Date | 01.03.15 | | Revision Date | 01.03.15 | |
| Issue No. | 1 | | Revision No. | 0 | |

| S. No. | Characteristics | Unit | Specification |
|--------|--|------|---------------|
| 1 | Total Acidity as HF, w/w, <i>Minimum</i> | % | 40.0 |
| 2 | Chloride as Cl, w/w, <i>Maximum</i> | ppm | 1000 |

Reference: Inhouse specification

Abbreviations:

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 w/w weight by weight



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