

# NATIONAL METALLURGICAL LABORATORY

(Council of Scientific & Industrial Research)

JAMSHEDPUR – 831 007.

## NML Certified Reference Materials

THE SALES TAX IS AS STANDARD SAMPLES AGAINST

**Sl. No. 1 to 17 @ Rs. 3,000.00 per 100 gms bottle**

**Sl. No. 18 to 25 @ Rs. 3,500.00 per 100 gms bottle**

(The rates are inclusive of packing, forwarding and freight charges)

### FOLLOWS:

**C.S.T. @ 10% or 4% on submission of Form 'C' or 'D' for inter-state sale.**

**B.S.T. @ 8% or 3% on submission of Form IX for sale in Bihar**

**T.O.T. @ 1% Extra for sale in Bihar**

#### 1. LOW CARBON STEEL (No.13.9)

Carbon	...	0.028%
Silicon	...	0.12%
Sulphur	...	0.020%
Phosphorus	...	0.011%
Manganese	...	0.39%

#### 2. STEEL 0.35% C (No.13.5)

Carbon	...	0.35%
Silicon	...	0.21%
Sulphur	...	0.02%
Phosphorus	...	0.025%
Manganese	...	0.75%

#### 3. STEEL 0.52% C (No.13.4A)

Carbon	...	0.52%
Silicon	...	0.15%
Sulphur	...	0.035%
Phosphorus	...	0.028%
Manganese	...	0.75%

#### 4. STEEL 1.0% C (No.20.02)

Carbon	...	1.16%
Silicon	...	0.048%
Sulphur	...	0.019%
Phosphorus	...	0.078%
Manganese	...	0.55%

#### 5. CAST IRON (No.1.8)

Total Carbon	...	3.36%
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#### 7. IRON ORE (No.61.3)

Total Iron	...	62.13%
Silica	...	5.58%
Alumina	...	1.91%
Sulphur	...	0.030%
Phosphorus	...	0.055%

#### 8. FERRO SILICON (No.31.2)

Silicon	...	74.37%
Aluminium	...	1.23%
Calcium	...	1.80%
Phosphorus	...	0.031%

#### 9. FERRO-VANADIUM (No.35.1)

Vanadium	...	52.10%
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#### 10. FERRO-CHROME (High Carbon) (No.30.3)

Chromium	...	64.95%
Silicon	...	1.77%
Carbon	...	6.43%

#### 11. FERRO TITANIUM (No.34.1)

Silicon	...	2.55%
Titanium	...	24.91%
Aluminium	...	5.54%

#### 12. 6% Si-AI ALLOYS (No.51.1)

Silicon	...	6.150%
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Silicon	...	1.82%	Manganese	...	0.195%
Sulphur	...	0.069%	Copper	...	0.295%
Phosphorus	...	0.18%	Iron	...	0.790%
Manganese	...	0.61%			

#### 6. IRON ORE (No.61.2)

Total Iron	...	68.48%
Silica	...	1.08%
Sulphur	...	0.0076%
Phosphorus	...	0.0275%
Alumina	...	0.837%

#### 14. FLUORSPAR (No.72.1)

Silica	...	1.34%
Total Ferric Oxide	...	0.80%
Aluminium Oxide	...	0.84%
Calcium Fluoride	...	95.63%
Calcium Carbonate	...	1.19%

#### 15. H.C.Fe-Manganese (No.33.2)

Carbon	...	6.82%
Silicon	...	1.14%
Manganese	...	80.8%
Phosphorus	...	0.19%

#### 16. L.C.Fe-Manganese (No.33.1)

Carbon	...	0.115%
Manganese	...	85.48%
Silicon	...	1.74%
Phosphorus	...	0.129%

#### 17. Lime Stone (No.71.1)

Silica	...	0.52%
Calcium Oxide	...	55.10%
Magnesium Oxide	...	0.50%
Loss on Ignition	...	43.48%

#### 18. Stainless Steel (No.20.2)

Carbon	...	0.087%
Silicon	...	0.573%
Sulphur	...	0.014%
Phosphorus	...	0.027%

#### 24. Nickel Steel (No.21.2)

Manganese	...	1.34%
Nickel	...	8.75%
Chromium	...	19.13%

#### 19. Alloy Cast Iron (No.7.3)

Total Carbon	...	3.07%
Graphitic Carbon	...	2.55%
Combined Carbon	...	0.52%

#### 13. MANGANESE ORE (No.66.2)

Silica	...	4.96%
Iron	...	10.045%
Manganese	...	47.43%
Alumina	...	1.65%
Phos. Pentoxide	...	0.295%

#### 21. Brass 60/40 (No.41.2)

Copper	...	58.18%
Lead	...	2.56%
Zinc	...	38.99%
Iron	...	0.09%
Tin	...	0.12%

#### 22. Low Alloy Steel (No.23.4)

Silicon	...	0.88%
Manganese	...	0.39%
Chromium	...	5.99%
Nickel	...	0.54%
Copper	...	0.33%
Vanadium	...	0.69%

#### 23. Low Alloy Steel (No.23.5)

Silicon	...	0.526%
Manganese	...	0.34%
Chromium	...	4.10%
Nickel	...	2.57%
Copper	...	0.497%
Vanadium	...	0.44%

Carbon	...	0.154%
Silicon	...	0.287%
Phosphorus	...	0.046%
Sulphur	...	0.035%
Nickel	...	3.05%
Chromium	...	0.84%
Manganese	...	0.51%

Silicon	...	1.21%
Sulphur	...	0.014%
Phosphorus	...	0.22%
Manganese	...	0.82%
Chromium	...	0.38%
Nickel	...	1.89%
Copper	...	0.029%

**20. Brass 70/30 (No.42.1)**

Copper	...	70.48%
Zinc	...	29.39%
Iron	...	0.07%

**25. Ocean Bed Polymetallic Nodules (No.2388)**

Silica	...	16.07%
Iron	...	14.94%
Manganese	...	21.28%
Nickel	...	0.71%
Cobalt	...	0.14%
Copper	...	0.49%

**The samples will be despatched by REGISTERED POST PARCEL on receipt of full payment in advance. All payments are to be made in favour of the Director, National Metallurgical Laboratory, Jamshedpur-831 007, by Demand Draft of S.B.I. against our specific offer.**

Please let us have your requirements to enable us to make a specific offer to you for your requirement of the available standard samples at the time of receipt of your order/request.

Kindly note that no remittance is to be made unless a specific offers has been made to you.

The above rates are ex-godown and are subject to revision at any time without notice. Further we do not give any guarantee to supply the samples based on this list/circular, unless your order is specifically acknowledged and accepted by this Laboratory for execution.