

Grade Identification

Tired of referring to
Google / datasheets /
books for grades?

Powered by TotalMateria and the patented SmartComp, MetaLib Pro enables instant search and display of grades matching the OES' analysis report.

Grade Verification

Risking your quality by
relying on inauthentic data
with manual verification?

Analyse a sample with Metal Power OES and search for a grade from the database for instant comparison with colour codes and remarks on elements that are out of range.

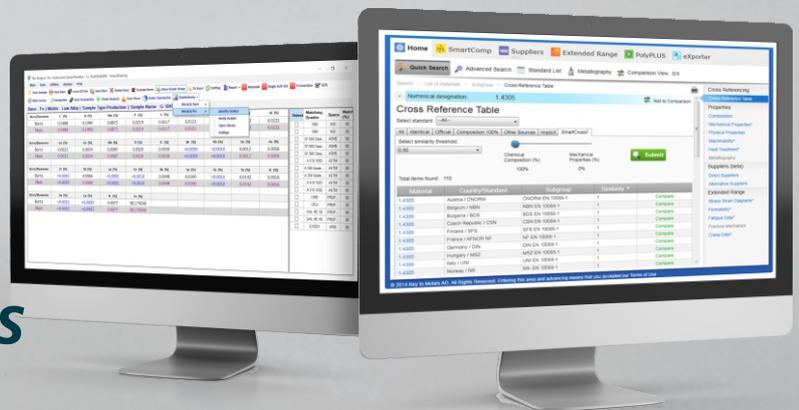
Detailed Reporting

Unable to reflect the full
grade adherence on
reports sent to customers?

Generate a detailed OES analysis report including the relevant grade name, specifications with min/max tolerance values for each element and export it directly to your report.



**THE WORLD'S
LARGEST AND MOST
COMPREHENSIVE METALS
GRADES' LIBRARY**



Grade identification and/or verification is a key requirement for most OES users. Whether it is in the business of buying or selling scrap, validating adherence to customer/internal norms or vendor adherence to specifications, grade identification is something that is often critical to both operations and Quality Control. To address this critical requirement, Metal Power now offers the world's largest and most comprehensive metals database, with more than 350,000+ grades, powered by Total Materia / Key to Metals AG.

Benefits

A tool to view the required grade's chemical, mechanical, magnetic and physical properties as well as the heat treatment, machineability and metallography data

The ability to instantly see equivalent grades across standards; this allows users to check what grade the product matches in any required standard, including ASTM, EN, BIS, JIS, DIN, GOST and many more besides

Lifetime free upgrades to the database to ensure that the library always reflects the latest and most up-to-date grades information!

Sample Screenshots

MetalLib PRO

Material designation: SA-240 330409

Mechanical Properties

Measurement Units: Metric (SI) Anglo-Saxon

Select condition: 1. Plates, sheets, strips, Heat treated

Selected Condition: 1. Plates, sheets, strips; Heat treated

Temperature (°C)	Value	Unit	Note
RT	≥ 515	MPa	

Hardness

Temperature (°C)	Value	Unit	Note
RT	≤ 201	(H) HBW	
RT	≤ 82	(HR) HRBW	

Elongation, A

Temperature (°C)	Value	Unit	Note
RT	≥ 40	%	Lo = 50 mm

Yield stress, Rp0.2

Temperature (°C)	Value	Unit	Note
RT	≥ 515	MPa	

Mechanical Properties

MetalLib PRO

Numerical designation: 1.0301

Metallography Data

Select condition: 3. Hot rolled, austempered at 820°C for 30 minutes; rapid cooling to 650°C; holding 1 hour and then cooling in air to room temperature; ...

General Information: Hot rolled, austempered at 820°C for 30 minutes; rapid cooling to 650°C; holding 1 hour and then cooling in air to room temperature;

Microstructure: Equiaxed grains of ferrite (white) with islands of pearlite (dark)

Etching medium: 2%Nital

Comment: ...

Criteria	Min.	Max.	Approx
A1			0.028
C			0.1
Cr			0.09
Cu			0.21
Mn			0.48
Mo			0.02
N			0.12
P			0.008
S			0.01
Si			0.22
V			0.01

Metallography Data

MetalLib PRO

Material designation: EN2A

Cross Reference Table

Select criteria: All

Total items found: 262

Material #	Country/Standard	EQUIVALENCY CATEGORY	Compare
940 A 10	United Kingdom / B.S.	Official	Compare
UGG 12	Austria / ONORM	Composition 100%	Compare
1.0301	Germany / DIN	Other sources	Compare
1.0301	European Union / EN	Other sources	Compare
1.0301	France / AFNOR NF	Other sources	Compare
1.0301	United Kingdom / B.S.	Other sources	Compare
1.0301	Bulgaria / BDS	Other sources	Compare
1.0301	Czech Republic / CSN	Other sources	Compare
1.0301	Hungary / MSZ	Other sources	Compare
1.0301	Belgium / NBN	Other sources	Compare
1.0301	Norway / NS	Other sources	Compare
1.0301	Austria / ONORM	Other sources	Compare
1.0301	Poland / PN	Other sources	Compare
1.0301	Finland / SFS	Other sources	Compare

Cross-Reference Table

MetalLib PRO

Comparison View

MATERIAL DESIGNATION: 316L

MATERIAL DESIGNATION: 30316L

Country/Standard: United States / SAE

Subgroup: SAE AMS-QQ-S-763D; (2013); Steel, Corrosion Resistant, Bars, Wire, Shapes and Forgings

Chemical Composition (%)

Criteria	Min.	Max.	Approx	Criteria	Min.	Max.	Approx
C			0.03	C			0.03
Cr	16	18		Cr	16	18	
Cu			1	Cu			1
Mn			2	Mn			2
Mo	2	3		Mo	2	3	
N			0.1	N			0.1
Ni	10	14		Ni	10	14	
P			0.045	P			0.045
S			0.03	S			0.03
Si			1	Si			1

Mechanical Properties

Yield stress, R _{eL} (MPa)	T (°C)	Min.	Max.	Approx	Yield stress, R _{eL} (MPa)	T (°C)	Min.	Max.	Approx
20	Annealed (cold); Forging; d or t > 12.70 mm				20	Annealed (cold); t > 12.7 mm			
172					172				

Comparison View

Key Features

- Over 15 million property records for 350,000+ grades from 74 countries/ standards
- Instant access to chemical composition, mechanical, physical, and magnetic properties as well as heat treatment, machineability and metallography data
- Constantly updated to reflect the latest national and international standards (such as AISI/ ASTM, DIN, EN, BS, JIS, GOST etc.)
- 1000's of producers' datasheets
- Cross-referencing between international standards
- Algorithms to find similar materials based on OES analysis



METAL POWER

PRECISION SPECTROMETERS

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