

# Total Materia: The World's Most Comprehensive Materials Database

For Thermo Scientific Optical Emission and X-Ray Fluorescence Spectrometers in the Metals Industries

Total Materia is the most powerful combination of metals database, search engine and program of expert consultancy. It includes chemical composition, properties and specifications for metals, search and cross-reference tools that enable considerable time and cost savings. Total Materia allows exporting concentrations to Thermo Scientific OXSAS grade limits, for most accurate grade check and quality sort.

## Value added

- Extends the capability of your spectrometer with the most comprehensive and only certified metals database on the market
- The complete database and functionality on your spectrometer computer, no need to access Internet



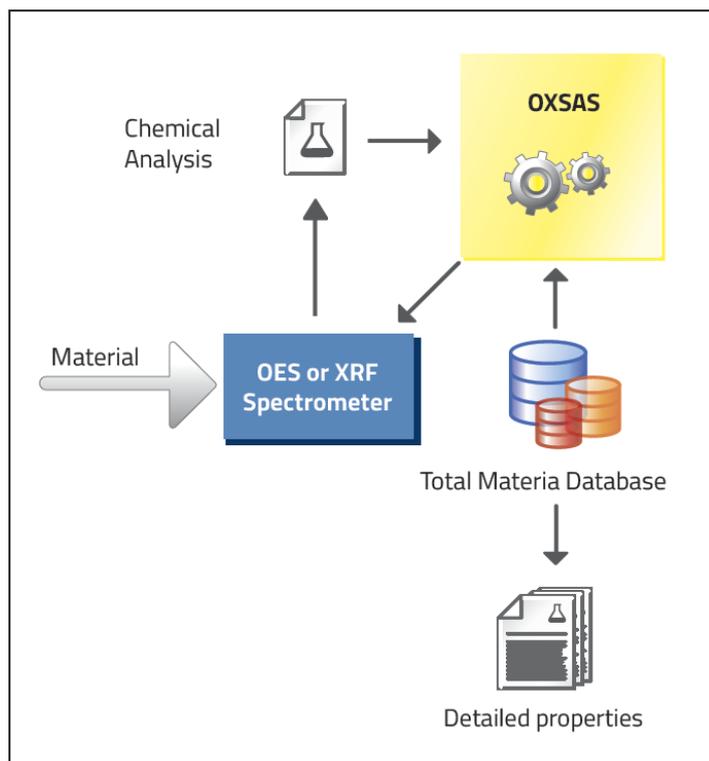
## Comprehensive

- Over 10,000,000 metal property records for iron & steel, ferrous alloys, aluminum, copper, titanium, magnesium, tin, zinc, lead, nickel, and more
- Over 320,000 steel and nonferrous metals designations from all major organizations and associations
- Chemical composition, standard reference, application guidelines, mechanical properties, heat treatment details, properties at elevated temperatures, fatigue properties, and more
- Tables with equivalent materials worldwide and applied artificial intelligence within SmartCross™ module for cross-referencing

## Benefit

- Accurate export of Total Materia grades concentration data to OXSAS
- Replace your piles of norms and guides costing you thousands of dollars by a single database
- Save costs in purchasing material specifications
- Save time searching material properties and cross-references
- Cost savings in material sourcing through increased knowledge and cross-referencing
- Free updates and free technical support by Total Materia specialists. Knowledge base of metal related articles

 **Total Materia** Included with OXSAS analytical software



## Easy to use

- Easy selection of grades concentration data in Total Materia and direct export to OXSAS as grade limits
- Directly define and export inner grade limits to OXSAS
- Replace hours of tedious research with a few clicks
- Easy identification of materials analyzed on your spectrometer
- Easy cross referencing and easy search
- Search for metal alloys, and their properties, from around the world, in seconds with easy text-based searches
- Identification of unknown materials by their composition and properties
- Checking and updating done for you by Total Materia on regular basis.

## Unique features

- Contains information that is accurate
- Robust update policy
- True multilingual platform, available in more than 20 languages
- Application of complex algorithms within SmartCross™, a proprietary search methodology for finding cross-references
- Total Materia is the only metals database with top international certification.

Name	Description	Type	Method	TS	Check All	Suppr. Inner
15NiCrMo5-8-4	SN EN 10216-2	None				
17NiCrMo 6-4	SN EN 10084	None				
17NiCrMo5 6-4	SN EN 10084	None				
18CrNiMo 7-6	SN EN 10084	None				
18NiMoNi 5-5	SN EN 10222-2	None				
20MnMoNi 4 S	SNV 210610	None				

Element	Grade Limits		Inner Limits		Type	Related Element
	Min	Max	Min	Max		
C	0.1400	0.2000	0.0000	0.0000	Concentration	
Cr	0.8000	1.1000	0.0000	0.0000	Concentration	
Mn	0.6000	0.9000	0.0000	0.0000	Concentration	
Mo	0.1500	0.2500	0.0000	0.0000	Concentration	
Ni	1.2000	1.5000	0.0000	0.0000	Concentration	
P	0.0000	0.0050	0.0000	0.0000	Concentration	
S	0.0020	0.0040	0.0000	0.0000	Concentration	
Si	0.0000	0.4000	0.0000	0.0000	Concentration	

Criteria	Grade Limits		Inner Limits	
	Min.	Max.	Min.	Max.
C	0.42	0.5	0.462	0.475
Mn	0.5	0.8	0.55	0.76
P	0	0.035	0	0.0325
S	0	0.035	0	0.0325
Si	0.15	0.35	0.165	0.325

## Export to OXSAS

## Grades export

- From the grade composition page, simply click on “Export to OXSAS” button in order to export the data into OXSAS database. The export window allows you setting up different parameters for the export. You can choose to export only values defined in the Total Materia Database as Grade limits, or to export inner limits too. In the latter case, you can enter relative factors for calculation of inner limits, both for minimum and maximum values
- Clicking on “Recalculate limits” will calculate inner limits values based on selected percentage variation
- You can also change these marked fields by typing new values. You can also add elements that do not exist in the chemical composition obtained in the Total Materia database.

## OES/X-Ray spectrometers

- To keep you informed about our latest developments in our instrumentation, automation and software, please visit [www.thermofisher.com/oes](http://www.thermofisher.com/oes) and [www.thermofisher.com/xray](http://www.thermofisher.com/xray)

## Total Materia

- For more information on Total Materia, please visit [www.totalmateria.com](http://www.totalmateria.com)



Find out more at [www.thermofisher.com/elemental](http://www.thermofisher.com/elemental)

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