



# DataPLUS

Material welding info, lubricants, tribology, dimensions and coatings information



Joints



Lubricants



Tribology



Dimensions



Coatings

DataPLUS is a supplementary module providing data subsets covering joints information, lubricants and coolants, material dimensions, tribology, and coatings for thousands of metallic and non-metallic materials.

## The Challenge

- Material and consumables selection for successful welding operations
- A unified view of both material property and dimensional data
- Finding coatings and their properties related to materials in one unified platform
- Communicating between engineering and purchasing avoiding potential errors

## The Solution

- ✓ DataPLUS covers a wide range of information within its five data sub-sets acting as a critical additional resource for the process of material selection
- ✓ Completely integrated, DataPLUS connects seamlessly to other key information such as chemical composition, tables of equivalent materials, mechanical and physical properties, which means viewing the bigger picture is effortless

## The Benefits

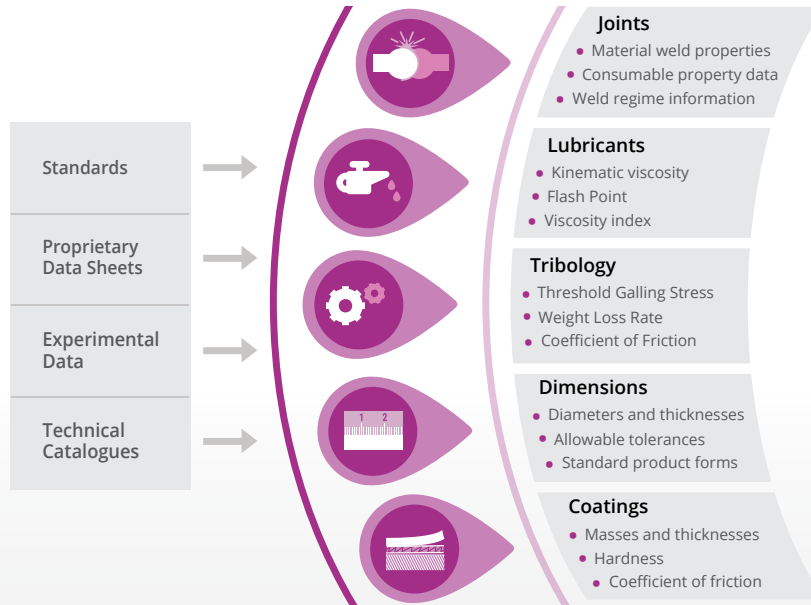
- Drives more accurate material selection
- Helps justify material placement according to application
- Common tool for both engineering and purchasing helping to get it right first time



Total Materia



In synergy with the primary materials databases, Total Metals and PolyPLUS, DataPLUS supports and supplements key industrial application decisions by helping make accurate and considered choices relating to material selection and usage.



**Condition**

Electrode: ER 400 USA / AWS  
 Welding method: GTAW  
 Joint geometry: Root joint  
 Shielding gas: Argon, Root gas: Nitrogen  
 Consumable: Consumable for single, double sided, flat electrodes and voltage 10-120V, electrode type, Thoriated tungsten, number of passes: 1

**Properties of joint**

**Mechanical Properties**

Property	Value	Unit	Test
As welded (post joint condition: "A", 0.2, 2 mm N, 1 position)			

### Welding information for global materials and consumables

Find critical welding information such as mechanical properties at joint, information for thousands of material combinations, base material property data, consumable characteristics and references to related welding methodologies.

**GEOLube 50 A 140**

Standard Number: 50 A 140  
 Name: GEOLUBE  
 Grade: 50 A 140  
 Base oil: 50 A 140  
 Additives: 50 A 140  
 Description: 50 A 140 is a high quality, multi-grade engine oil meeting all requirements for 50 A 140 applications. It is suitable for use in all types of engines, including turbocharged engines, and provides excellent protection against wear, oxidation, and deposits.

**Properties**

Property	Value	Unit	Test
Viscosity (40°C)	100	cSt	ASTM D445
Flash Point	230	°C	ASTM D93
Fire Point	250	°C	ASTM D93
API Service Category	SE		
ACEA Category	A3/B4		
ISO-VG Grade	VG 46		
ISO-VG Grade	VG 46		
ISO-VG Grade	VG 46		

### Lubricant materials and tribological data

Make key decisions about suitable lubricants to reduce cost by ensuring optimized part life. In combination with tribological data for thousands of materials, a complete picture of surface interaction can be discovered. Find tribological data to understand the friction and subsequent wear potential for thousands of international materials and to help avoid unnecessary power loss and part degradation through the correct lubricant and coolant selection.

**Dimensions & Tolerances**

Dimensions & Tolerances are defined based on:

Standard: European Union / EN  
 Standard Number: EN 1146  
 Working Drawing: Coarse and Super-fine  
 Last Revision: 2010

**Tolerance on thickness for strip before sinning**

Thickness (mm)	Class A	Class B	Class C
0.1 - 0.2	+0.010	+0.007	+0.015
0.2 - 0.5	+0.015	+0.010	+0.022

### Find dimension and tolerance information in seconds

A must have to bridge the gap between engineering and purchasing, the dimensions and tolerances dataset allows you to find information relating to specific material measurements, their permissible variations along with useful information about packaging formats.

**Coatings**

Standard: EN  
 Standard Number: EN 1214  
 Working Drawing: Hot dip Galvanized steel sheet and strip  
 Last Revision: 2011

**Grade symbol, applicable nominal thickness and coating mass symbol**

Grade	Symbol	Thickness (mm)	Coating mass (g/m <sup>2</sup> )
EN10130	EN10130	0.10 - 0.20	40 - 60
EN10130	EN10130	0.20 - 0.30	60 - 80
EN10130	EN10130	0.30 - 0.40	80 - 100
EN10130	EN10130	0.40 - 0.50	100 - 120
EN10130	EN10130	0.50 - 0.60	120 - 140
EN10130	EN10130	0.60 - 0.70	140 - 160
EN10130	EN10130	0.70 - 0.80	160 - 180
EN10130	EN10130	0.80 - 0.90	180 - 200
EN10130	EN10130	0.90 - 1.00	200 - 220

### Search for coatings information to understand performance

Hundreds of coating designations available with multiple properties and test data to help drive accurate decisions relating to coating selection and performance. Using the simple search interface, find properties such as coefficient of friction, maximum working temperature, micro hardness and much more.