

# C151S

## CDA Alloy No.C15100

### 1. Features

- High electrical conductivity due to simple chemical composition
- High strength and superior stress relaxation resistance
- Applicable to small electronic parts because of lower heat generation with high electrical conductivity

### 2. Applications

- Bus bar in Junction box and Relay box, Terminals for Automobile connectors, which large electric current flows

### 3. Chemical composition (Weight%)

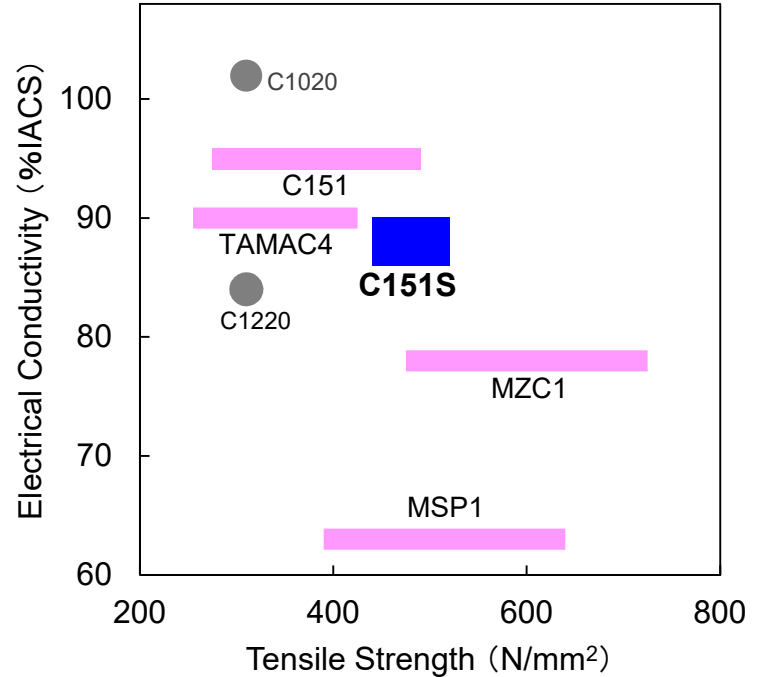
Zr	Cu
0.1	Rem. *

\* Including inevitable impurities and trace additive elements

### 4. Physical properties

Property	Representative Value
Specific Gravity ( 293 K )	8.9
Coefficient of Thermal Expansion ( / K : 293~573 K )	$17.7 \times 10^{-6}$
Thermal Conductivity ( W / ( m · K ) : 293 K )	347
Electrical Conductivity ( %IACS : 293 K )	88
Modulus of Elasticity ( kN / mm <sup>2</sup> : 293 K )	121
Poisson's ratio ( 293 K )	0.33

### 5. Positioning of Alloy



### 6. Mechanical properties

	Temper	Typical Value
	SH	SH t : 0.64mm
Tensile Strength ( N/mm <sup>2</sup> )	440~520	487
0.2% Yield Strength ( N/mm <sup>2</sup> )	—	454
Elongation ( % )	5 min.	11
Elastic Limit Kb <sub>0.1</sub> <sup>※1</sup> ( N/mm <sup>2</sup> )	—	( 419 )
Vickers Hardness <sup>※2</sup> ( HV )	( 130min. )	( 147 )

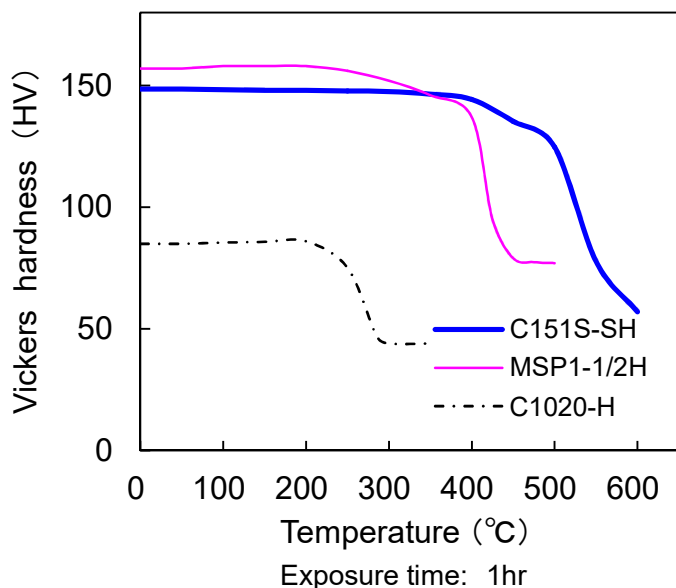
※1 Sampling direction : T.D.

※1, 2 Reference value

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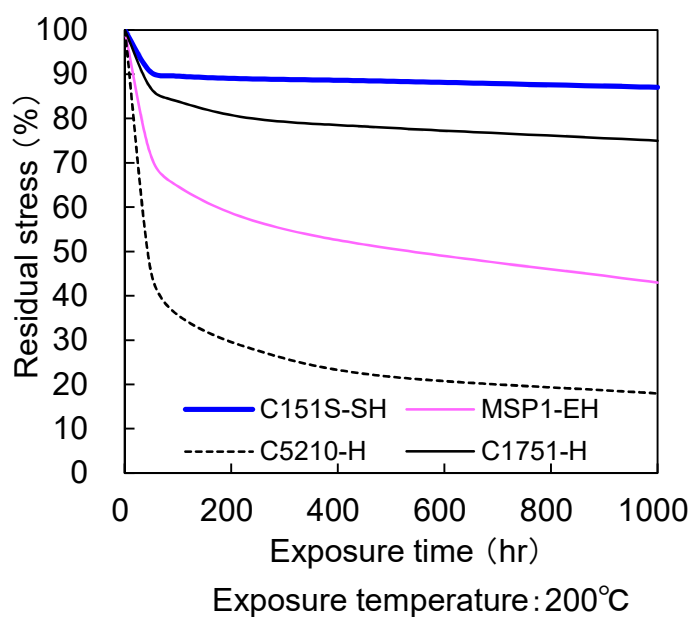
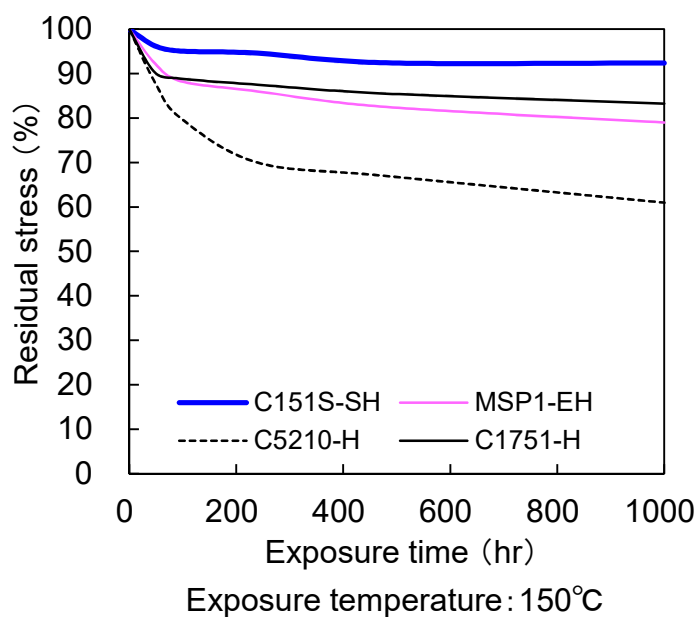
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## 7. Resistance to Softening



## 8. Stress relaxation resistance

Sampling direction: L.D. Bending stress: 80% of 0.2% yield strength



## 9. Bendability

Specimen: Width=10mm Test conditions: 90° W-Bend Load=9.8kN

Temper	Sampling direction (to the rolling direction)	Bending radius(mm) R							R/t
		0.1	0.2	0.25	0.4	0.6	0.8	1.0	
SH t:0.64mm	0° : (Good Way)	▲	▲	△	△	△	△	○	0.4
	90° : (Bad Way)	▲	▲	△	△	△	△	△	0.4

Evaluation: ◎Good (Acceptance), ○Minor rough surface (Acceptance), △Rough surface (Acceptance), ▲Minor crack (Rejection), ×Major crack (Rejection)