# **Sheet Recommendations**

## 1. Fundamentals: Tinplate according to the following standards

EN	10202 (European Standard)
DIN	1616 - 1984
EURONORM	145 - 78 (sheets) and 146 - 80 (coils), (SR) 158 - 83 (DR)
ISO	11949 (International Standard)

Intended use and requested direction of rolling of sheets to be indicated on orders.

#### 2.Tinlayer

Electrolytical tinning E 2.8 - E 11.2 and surface quality according to the state standard values. For tin layers less than E 2.8 (LTS), weldability must be checked by previous testing. Metallic tin layer thickness should then be at least 0.5g/m2 on both sides; this should be observed especially with lacquered sheets as any thermal treatment causes a partial conversion of metallic to alloyed tin.

### 3. Hardness and mechanical properties

Single reduced (SR) sheets with degrees of hardness from T52 to T70 Double reduced (DR) qualities with DR550 (DR8) and DR620 (DR9)

It should be observed that DR qualities have a reduced ability to deformation which can impair further processing. The ability to deformation being influenced not only by the offset yield stress but also by non-specified carbide and non-metallic steel inclusions, special agreements will have to be made with the supplier for critical cases of application.

### 4. Surface

Passivation and oil layers with a thickness that does not affect the weldability are acceptable. The blank margin of lacquered sheets must not be contaminated by lacquer drops or condensation (danger of wire break and welding roller damage). Other surface qualities such as ECCS, TFS and blackplate must be lacquered on both sides for further processing. It is recommendable to check weldability before use.

### 5. Remarks

We advise you against using second quality sheets as certain properties that are important for application are not always guaranteed. Mechanical properties in direction of rolling are usually more favorable than those in other directions. We therefore recommend choosing the rolling direction preferably in direction of the development or the can's circumference.