

## Floor Characteristics

The type of the floor and the possible obstacles are factors that influence the amount of force required to move the cart as well as the transmission of vibrations and the wear on the wheel.

Based on the characteristics of the floor, the guidelines apply to selecting the right wheel:

- For irregular floors and in the case of obstacles, the wheels should have soft and thick tread and large diameter.
- For smooth floors and heavy loads, the wheels should have hard tread.

The table below provides a simple breakdown of the suitable tread for every floor type.

Flooring	Suitable tread material
Tiles	Plastic material, polyurethane or rubber
Asphalt	Rubber
Synthetic resin, concrete	Plastic material, polyurethane or rubber
Unpaved	Rubber
Grating	Rubber
With chips	Rubber

Additional information can be found in the wheel type overview, on page XYZ. There, for each wheel series the suitable floor types are specified in detail.

## Chemical Resistance

The table summarizes a number of general resistances for each wheel series to make the selection process easier.

Given the numerous chemicals, solvents, etc., precise information cannot be offered since materials with low resistance to a general class of substances may have high resistance to particular substances and vice versa. The concentration, temperature and length of exposure also has a major influence. Users should perform their own resistance tests with relevant materials.

Resistant to *	GN 22868	GN 22870	GN 22872	GN 22873	GN 22874	GN 22875	GN 22880	GN 22882	GN 22884	GN 22885	GN 22886	GN 22887	GN 22892	GN 22894
Alcohol	+	o	+	o	o	+	+	+	+	+	+	+	+	+
Hydrocarbons	+	o	+	o	o	o	+	+	+	+	+	+	+	+
Solvents	-	-	o	-	-	-	o	-	-	-	-	-	o	+
Weak acids	+	+	+	+	o	+	+	+	+	o	o	o	o	+
Strong acids	-	-	o	-	-	-	o	-	-	-	-	-	-	-
Weak alkali	o	o	+	o	o	o	+	o	o	o	o	o	+	+
Strong alkali	-	o	o	o	o	o	o	o	o	-	-	-	o	-
Water	o	+	+	+	+	o	+	+	+	o	o	o	+	+

\* + resistant, o conditionally resistant, - non-resistant

## Temperature Correction Factors

Depending on the ambient temperature, the load capacity must be adjusted based on the temperature correction factors given in the table.

Operating temperature		Temperature correction factor												
		GN 22868	GN 22872	GN 22873	GN 22874	GN 22875	GN 22882	GN 22884	GN 22885	GN 22886	GN 22887	GN 22892	GN 22894	
from	to													
-40 °C	-20 °C	-	-	-	0,4	0,4	-	-	-	-	-	0,5	0,5	
-20 °C	0 °C	1	0,8	0,8	1	1	1	1	1	1	1	1	1	
0 °C	+20 °C	1	1	1	1	1	1	1	1	1	1	1	1	
+20 °C	+40 °C	1	1	1	1	1	1	1	1	1	1	1	1	
+40 °C	+60 °C	0,9	0,85	0,85	0,85	0,85	0,9	0,85	0,9	0,9	0,9	0,9	1	
+60 °C	+80 °C	0,8	0,5	0,5	0,6	0,6	0,7	0,6	0,8	0,8	0,8	0,7	1	
+80 °C	+120 °C	-	-	-	-	0,4	0,4	-	-	-	-	0,6	1	
> +120 °C		-	-	-	-	-	-	-	-	-	-	-	1	

1 = 100% of the load capacity specified in the standard sheet

## Speed Correction Factors

The load capacities given for industrial casters in the standard sheet refer to a speed no greater than 4 km/h. At higher speeds, the load capacity must be adjusted based on the speed correction factors given in the table.

Speed		Speed correction factor												
		GN 22868	GN 22872	GN 22873	GN 22874	GN 22875	GN 22882	GN 22884	GN 22885	GN 22886	GN 22887	GN 22892	GN 22894	
from	to													
0 km/h	4 km/h	1	1	1	1	1	1	1	1	1	1	1	1	
4 km/h	6 km/h	0,7	-	-	-	0,8	0,6	0,6	0,8	1	0,8	-	-	
6 km/h	10 km/h	0,5	-	-	-	-	-	-	-	0,8	0,6	-	-	
10 km/h	12 km/h	0,4	-	-	-	-	-	-	-	0,7	0,5	-	-	
12 km/h	16 km/h	0,3	-	-	-	-	-	-	-	0,6	0,4	-	-	

1 = 100% of the load capacity specified in the standard sheet

The speed correction factors should only be regarded as general guide values, as many application-specific factors can affect the load capacity. A corresponding check should be carried out by the user.

