



MRM
MABATI ROLLING MILLS

STORAGE GUIDELINES

BUILDING PANELS

Store inside

The most reliable way of ensuring that building panels remain dry is to store them inside a weatherproof building, away from open doors or vents.

Store under cover

On many building sites, it is impractical to store panels inside. In this case, it is important to arrange a good covered area to store the panels. This could be done by erecting a scaffold frame and covering with a continuous, waterproof tarpaulin or sheet of plastic. Alternatively, a tarpaulin or other waterproof sheet can be draped over a bundle of panels, but in this case, it is important to ensure good air-flow all around the panels and that it is not resting on the top of the bundle by placing spacers between the top-most panels and the waterproofing. In any case, it is important to secure the tarpaulin or waterproof sheet all-round the pack, again ensuring that a gap is maintained to promote air flow.

Store off the ground

Most bundles of panels will be delivered on wooden "skids" which should be maintained for storage of the panels. This will ensure that the panels do not come into contact with the ground and that there is adequate air-flow around them. Use of this packaging arrangement will also ensure that the panels are supported adequately along their full length. This is equally important for individual panels when removed from the main stack.

Ideally, panels should be raised off the ground at least 30cm to ensure good air flow, no splashing and to minimize the risk of damage.

Store on a slope

While panels should always be stored on smooth, level ground, it is advisable to store them on a slight slope (3° – 5°) so that any water which might creep in will run off.

Lift with care

If panels or bundles are lifted with a crane, nylon slings should be used and never wire rope slings, however, this will always risk damaging the edge, so extra care must be taken. A better alternative is to use a specially designed spreader bar which ensures that the weight is taken at the right points. For sandwich panels, specially designed suction-cup devices are often used which support the panels well and minimize any risk of damage. If a forklift truck is used, the forks must be arranged to support the panel along its length, alternatively a spreader arrangement should be used. Where panels are handled manually, they should be lifted from the edge and carried upright with the long edge horizontal. For panels over 3m in length, two or more people should be used to support the panel and prevent buckling.

SHEETS

Store inside

The easiest way to ensure that the material is kept dry is to always store it inside.

Store in a temperature-controlled environment

Coated steel can weigh up to 20 tonnes and even small ones can weigh in excess of 1 tonne. Any debris or unevenness will result in this weight being supported on a very small area. A small indentation on the outer lap can travel several laps into the coil and cause many metres of scrap. Ideally, dedicated storage facilities should be used, but it is always essential that whatever a coil sits on is clean and smooth.

Avoid condensation

If it is not possible to store sheets at a constant temperature, then the operator should always be vigilant to avoid rapid temperature changes (such as taking material from an unheated warehouse at 0°C to a heated one at 20°C) which could lead to condensation on the steel.

Take care over storage

Packs of sheets are generally delivered and stored on a framework of wooden battens. It is important to ensure that these battens remain in good condition and they remain vertical to ensure their correct loading and the avoidance of pressure-spots. If the stack is removed from the original packaging, it is important to ensure that it is adequately supported and never placed directly onto the ground.

Limit the height of sheet stacks

It is often necessary to stack packs of sheet on top of each other. However, care should be taken since this will increase the amount of handling required to access different sheets. The height of stacks should be limited to avoid excessive pressure being applied to those at the bottom. Some products are particularly susceptible to marking from this pressure and advice should be sought from the manufacturer for these cases. Where multiple bundles of sheets are stacked, care should be taken to align the timber bearers on

successive packs.

Handle with care

It is advisable, wherever possible, to use suction or magnetic lifting devices to lift sheets from packs and where this is not possible, sheets should never be dragged from packs which could result in scratching. It is also advisable, where possible, to handle sheets on the reverse side so that any damage does not affect the appearance of the finished article.

Condition the material before using

Some prepainted steel products are designed to be processed at a certain temperature, for example to ensure the optimum flexibility. In these cases, it is important that the sheets are stored at this temperature for at least 24 hours before use. It is always advisable to seek guidance from the supplier whenever using a new product.

COATED STEEL

Store inside

The easiest way to ensure that the material is kept dry is to always store it inside.

Store in a temperature-controlled environment

Even when inside, if the air temperature varies greatly, condensation can form on coated steel which can promote corrosion, so it is best to ensure that the coil storage temperature remains reasonably constant.

Avoid condensation

If it is not possible to store coated steel at a constant temperature, then the operator should always be vigilant to avoid rapid temperature changes (such as taking a coil from an unheated warehouse at 0°C to a heated one at 20°C) which could lead to condensation on the steel. This can particularly be true when coated steel is delivered straight into a heated warehouse, so it is essential that it is given good ventilation to remove any condensation as quickly as possible.

Use dedicated storage facilities

The best storage solution is to use purpose-made stillages with coil contact points which are either wooden, rubber or covered in felt. Stillages should be inspected regularly to ensure that they remain in good condition. The coated steel contact surfaces should usually form a V-shape to hold the coil adequately and prevent ovalisation. If it must be placed directly on the ground, it is best to use rubber or felt mats underneath which spread the weight. If they are delivered on wooden pallets, these generally represent a good storage solution and it is often best to leave them on the pallets until use. However, small, part-used coated steel sometimes does not sit on wooden pallets as intended, so care is needed.

Avoid double-stacking

It is often tempting to store a second row of coated steel on top of the first (double-stacking) or even to multiple-stack coated steel. This practice increases the likelihood of damage, because more handling is required, and also increases the weight on the bottom so increasing the possibility of indentations or pressure marking. Double-stacking also dramatically increases the risk of accidents with coated steel. For both reasons of safety and avoiding damage, double-stacking is to be avoided wherever possible. Coated steel stored with the bore vertical (so-called eye to the sky) can sometimes be safely multiple stacked on pallets, but it is essential in this case to ensure that the top cover of the coated steel will cause no damage and will allow the next one sit safely on top.

Use soft lifting gear

Coated steel will usually be handled by either crane or fork-lift truck. In either case, it is best practice to cover the lifting gear with a soft material such as felt or cardboard to help in avoiding damage to the inner laps. Chain slings should never be used.