

betajoint[®] range

Material Safety Datasheet Issue 1.0
24/01/2012

1. Identification of the substance and company

Product name – BetaJoint

Permaban Ltd, Mill Close, Lee Mill Industrial Estate, Ivybridge, Devon PL21 9GL
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2. Composition / Information on Ingredients

BetaJoint is manufactured from steel.

3. Hazards Identification

When BetaJoint is heated to high temperatures, e.g. during welding or flame cutting, it may emit toxic and irritant fumes, which can cause metal fume fever. Repeated contact with protective coatings on the steel may cause skin complaints or irritate existing skin conditions and as such workers should wear suitable personal protective equipment.

4. First Aid Measures

Skin and eye contact

For lacerations from steel edges: Treat as other lacerations; if required, seek immediate medical attention.

Ingestion

Not relevant.

Inhalation

For the effects of inhaling fumes: Take the person into fresh air and seek immediate medical attention.

5. Fire Fighting Measures

BetaJoint is non-flammable.

6. Accidental Release Measures

Not applicable.

7. Handling & Storage

Handling

BetaJoint products may be secured by straps which should not be used to lift the product. These straps are under tension and could injure people's eyes or other parts of their body when that tension is released. Certain products may, as a result of processing, be brittle or have residual stress that can cause them to fracture or move significantly. All products are likely to have sharp edges, which could cause lacerations. Shearing of these products may produce flying particles. Workers should wear suitable protective clothing and equipment such as hand and eye protection. Users of BetaJoint should design their systems of work to account for hazards that might arise, e.g. tripping hazards onsite.

Storage

When stocking, use suitable racks that will ensure stability.

8. Exposure Controls & Personal Protection

Workers should wear suitable protective clothing and equipment, such as safety spectacles and cut-resistant gloves.

When fumes or dust are generated, users of BetaJoint should ensure adequate ventilation is available. If necessary, local fume extraction should be used. Alternatively, where necessary, those at risk of inhaling fumes should wear suitable respiratory protective equipment. A P2 dust mask may be appropriate (to EN 149, FFP2S).

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When using processes that are likely to generate dust or fumes, exposures should be kept as far below the current UK Occupational Exposure Limits as possible. To achieve this, adopt good hygiene to remove or suppress contaminants at source (by using local dust or fume extraction as close to the point of creation as possible) or provide suitable ventilation. Where there remains a risk of inhaling dust or fume, workers should wear suitable and adequate respiratory protective equipment. A P2 dust mask may be appropriate (to EN149, FFP2S).

9. Physical and Chemical Properties

Composition					Yield Stress (N/mm ²)	Tensile Strength (N/mm ²)	Melting Point °C	Density at 20°C (kg/m ³)
C	Mn	Si	S	P	440 Max	560 Max	450 / 1520	7.85
0.24 Max	1.5 Max	0.4 Max	0.05 Max	0.05 Max				

10. Stability & Reactivity

The product is stable under normal conditions, but when heated to high temperatures, it produces fumes.

11. Toxicological Information

Mechanical working, such as dry grinding or machining, will produce dust of the same composition as the base metal. If the product is heated to high temperatures, e.g. during welding or flame cutting, fumes containing oxides of iron and manganese are produced, together with breakdown products of any protective coating that may be on the sheet, all of which may be irritant.

The principal mode of entry into the body is by inhalation. Exposure to airborne iron-oxide fumes, in sufficient concentrations and over long periods of time, may cause benign lung changes. Repeated exposure to manganese can also affect the nervous system, especially the fine control of intentional movement. Prolonged contact with protective coatings on the sheet may cause irritation to the skin and may cause dermatitis.

12. Ecological Information

No known harmful effects.

13. Disposal Considerations

Recycle or landfill (steel is 100% recyclable).

14. Transport Information

The product is not classified as dangerous for carriage.

15. Regulatory Information

Plain carbon steel products are not classified as 'dangerous for supply' under the Chemicals (Hazard Information and Packaging) Regulations.

16. Other Information

Some relevant references:

HSE Guidance Notes:

EH26: Occupational skin diseases health and safety precautions

EH40: Occupational exposure limits - current edition

EH42: Monitoring strategies for toxic substances

EH44: Dust in the workplace: general principles of protection [1990]

EH54: Assessment of exposure to fume from welding and allied processes

EH55: The control of exposure to fume from welding, brazing and similar processes