

## Series of recent cases highlights dangers of liquefying Chinese fluorspar

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### Introduction

Gard has been made aware of three casualties which have occurred in the past three months involving vessels loaded with cargoes of Chinese fluorspar carried from Hong Kong. Each of the three vessels developed a severe list due to what is possibly a liquefaction of the cargo. In at least one of these cargoes, free water developed on the cargo surface during carriage. Only one of the vessels was able to be taken safely into the nearest port. Of the other two vessels; one capsized and the other was abandoned and was later found grounded. Due to the prevalence of the instances in a short period of time Members and Clients are recommended to pay special attention to the dangers of carrying this type of cargo.

The IMO Code of safe practice for solid bulk cargoes (BC Code), Sections 7 and 8 and Appendix A advises that mineral cargoes which contain both moisture and a proportion of fine particles can undergo liquefaction during ocean transport if shipped above a critical moisture point. The list of cargoes in Appendix A of the Bulk Code is not exhaustive, and some forms of fluorspar are known to liquefy and thereby impairing the vessel's stability.

### Loss prevention

To prevent hazardous liquefaction occurring, the IMO Bulk Code requires the flow properties of subject cargoes to be tested and subsequently certified by shippers prior to loading. Cargoes should not be loaded if their moisture content exceeds the certified Transportable Moisture Limit (TML). The loading conditions and method of loading can have serious impact on the moisture level and these types of cargoes should not be loaded if water is observed escaping from the cargo during loading.

For more information about shifting and liquefaction of solid bulk cargoes please see the article “Shifting of solid bulk cargoes” published in Gard News 150, available at [www.gard.no](http://www.gard.no)

We are grateful to Messrs. Richards Butler, Hong Kong for providing the initial information on the above topic.