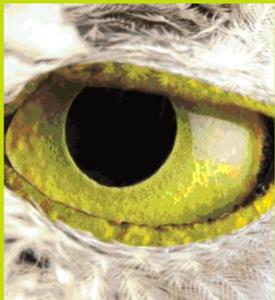


# The Insurances Involved in the Transportation of Sugar

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# Overview

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Refined sugar is made from raw sugar that has undergone a refining process to remove the molasses. Raw sugar is a sucrose which is synthesized from sugarcane or sugar beet and cannot immediately be consumed before going through the refining process to produce refined sugar or white sugar.

How is sugar shipped:

1) Bagged sugar, commonly referred to as White refined sugar. The bags are usually 50kg polypropylene bags although there is growing use of 1mt bulk (big) bags. Bagged sugar nowadays is shipped in containers although a few trades still ship bags breakbulk.

2) Bulk Sugar, commonly referred to as Raw sugar. Shipped in bulk although sometimes shipped in bulk containers.

# Bagged white sugar breakbulk

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# Bulk raw



# Sugar Trade Accounts for about 25% of World Demand

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## **Sugar trade accounts for about 25% of world demand.**

This share is higher than for the main agricultural commodities, grains, where this ratio ranges from 10% to 20%.

In the past, sugar trade was carried out mainly between governments through long-term agreements.

Over the last twenty years, sugar trade has been liberalized in many countries; the bulk of inter-state trade agreements no longer exists.

In 2014, total trade flow amounted to almost 57 million tonnes, of which 49 million tonnes traded in the so-called free market, comprising 33 million tonnes of raw sugar and 16 million tonnes of white sugar, and 7,5 million tonnes under preferential agreements, such as the Cuba – China Protocol, the EU preferential access granted to African-Caribbean and Pacific countries (ACP) and EBA (Everything But Arms) countries, and the US import quota as well as the North American Free Trade Agreement with Mexico.

# Sugar Trade Accounts for about 25% of World Demand (continued)

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On neither side of the world sugar trade (raws or whites) are there any real multinational companies producing and selling sugar in all continents. Trading houses are the only true global players.

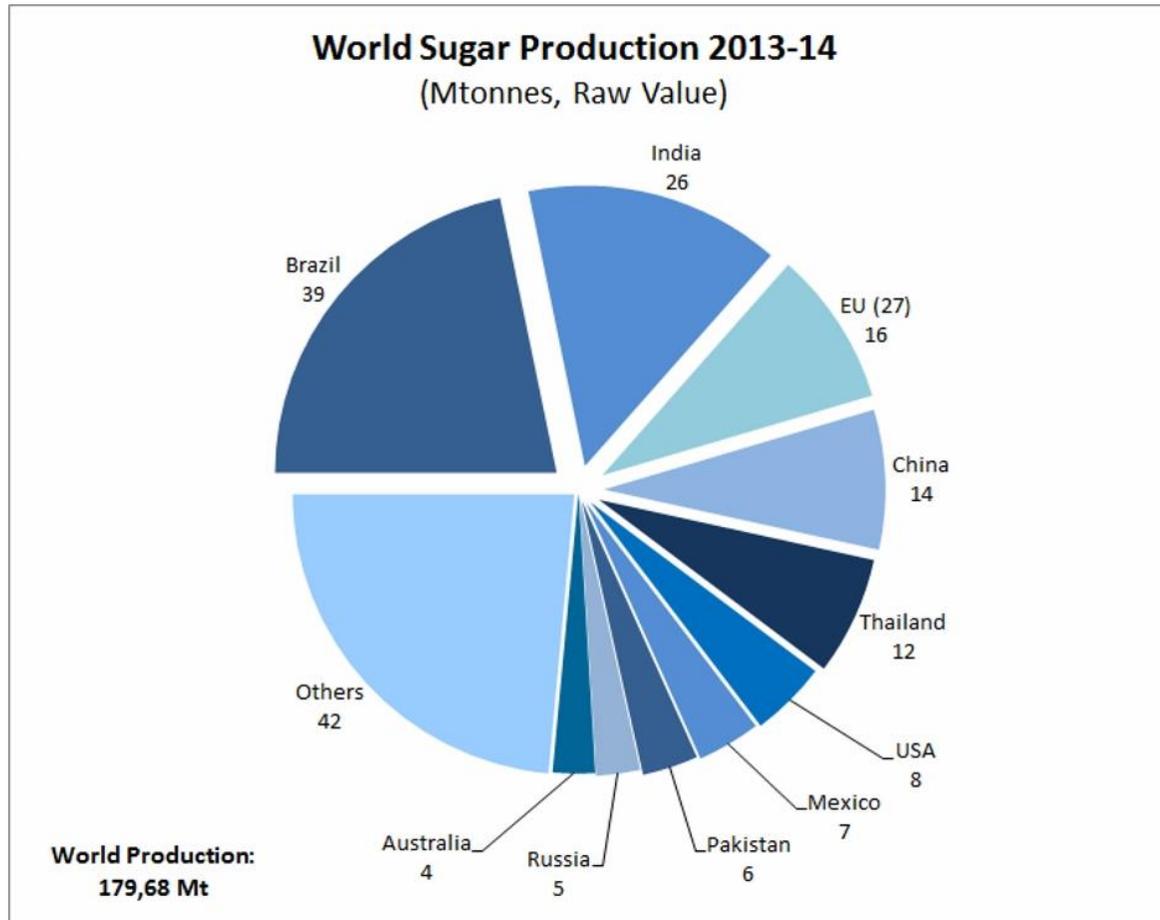
As an effect of progressive trade liberalization and the new direction of the sugar policies, the world sugar economy and trade have become increasingly sensitive to world prices. Competition has increased worldwide between sugar processors. In the recent past, the five largest sugar exporters have represented 80% of total world sugar exports.

Sugar is increasingly traded as a raw material (raw sugar) rather than a finished product (white sugar).

Global sugar production in 2015/16 is forecast to fall by 4% this year to 178.9m mtrv (raw value). This is the first meaningful fall in sugar production since 2008/09. The fall in production has been driven by Central South Brazil, where wet weather has hampered production, and the EU, where acreage is significantly lower year on year.

# Main Trades/Voyages – raws (continued)

The main consuming countries are India, EU, China and USA:



# White Sugar Trade

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The expansion of the white sugar trade has been closely linked to the emergence of the EU as a massive exporter and the rise of sugar requirements in the Arab world and Africa in the 1970s.

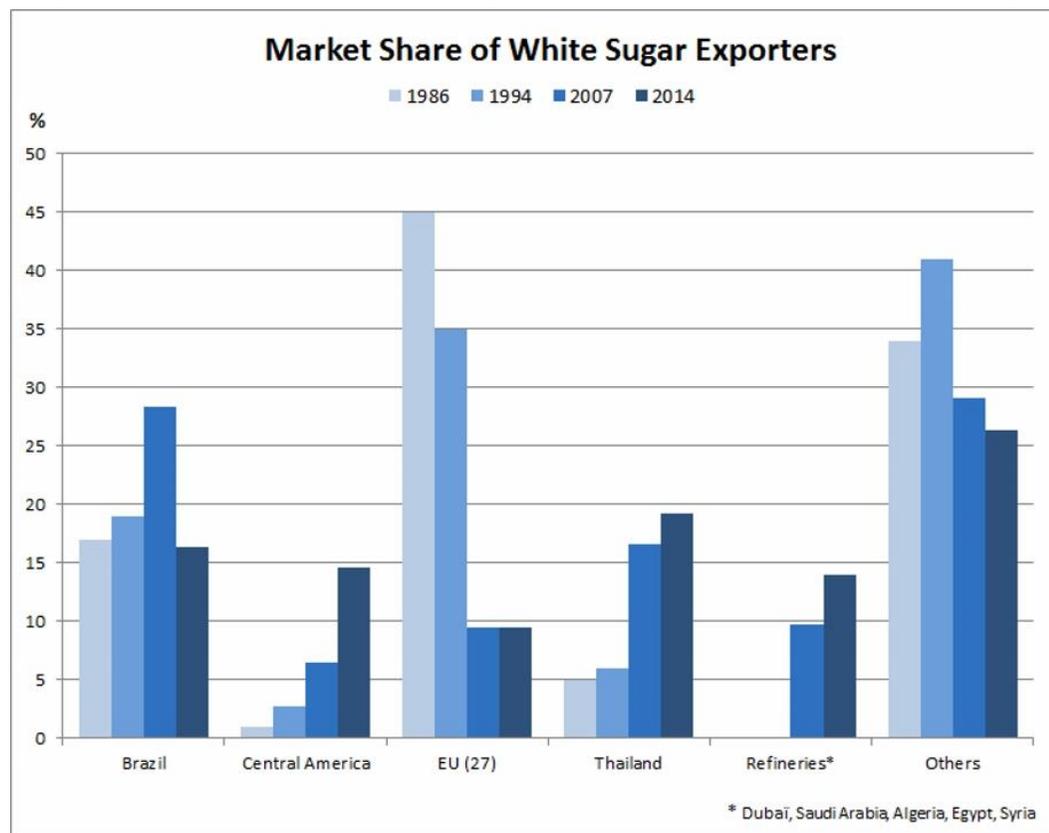
For a long time, the EU was the sole sizeable white sugar supplier, with a market share of 50% in the 1980s.

Since then, not only have new refineries been built at destination, displacing a part of white sugar demand, but also the structure of the white sugar demand itself has evolved. Since the middle of the 1990s, high quality whites have been displaced partly by low quality whites, which account for about 40% of the market nowadays. However the setting up of new refineries at destination (Yemen, Syria, Bahrein) and the 2017 reform in the EU which would make again this country as a large exporter should allow the refined segment to regain some impetus.

## White sugar trade – continued.

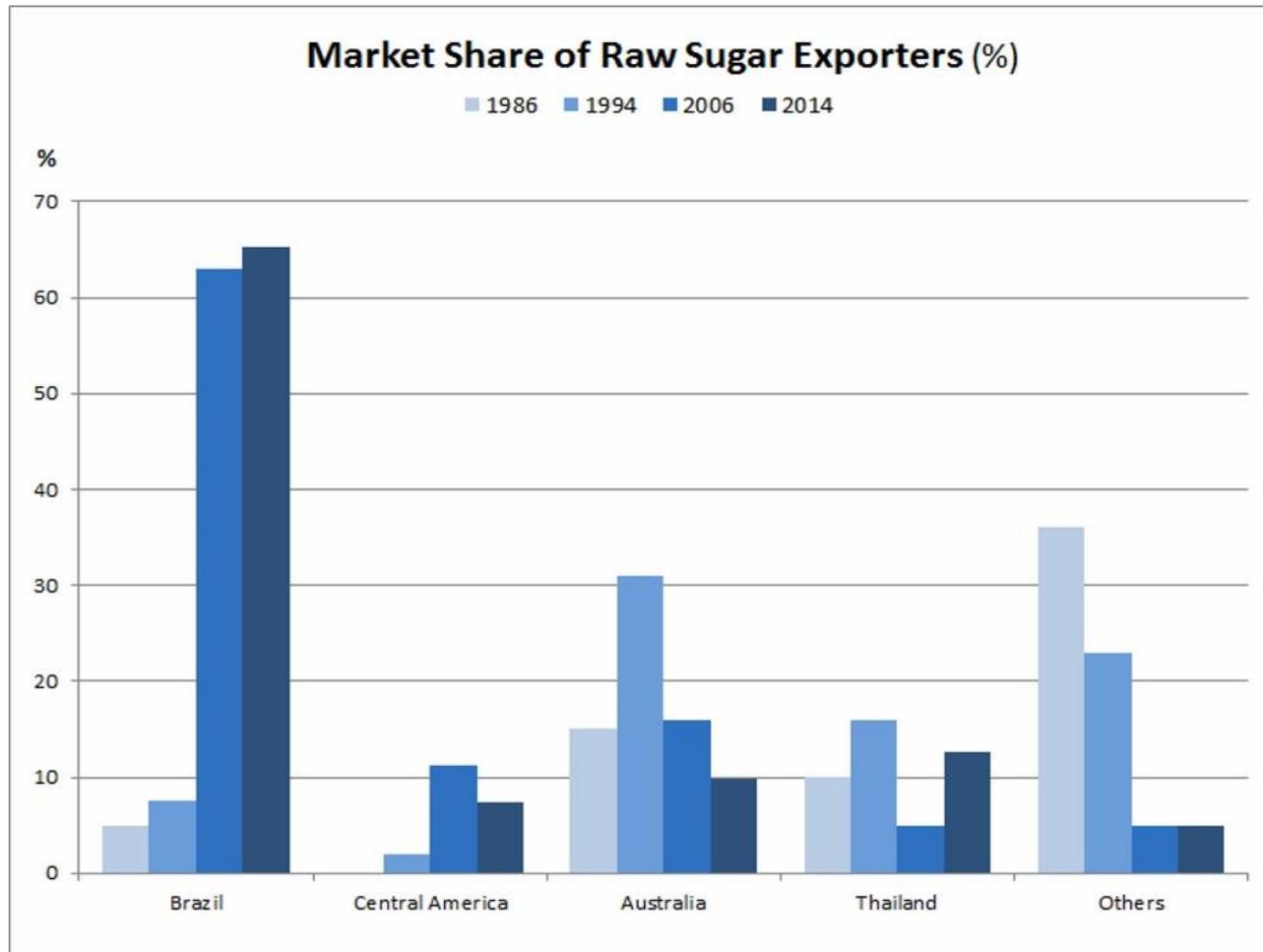
In the raw sugar market, supply is very concentrated, with Brazil, EU, Thailand and refineries at destination representing 60% of white sugar exports.

On the demand side, white sugar trade is more atomized than the raw sugar trade, with the ten largest importing countries representing less than 45% of white sugar demand.

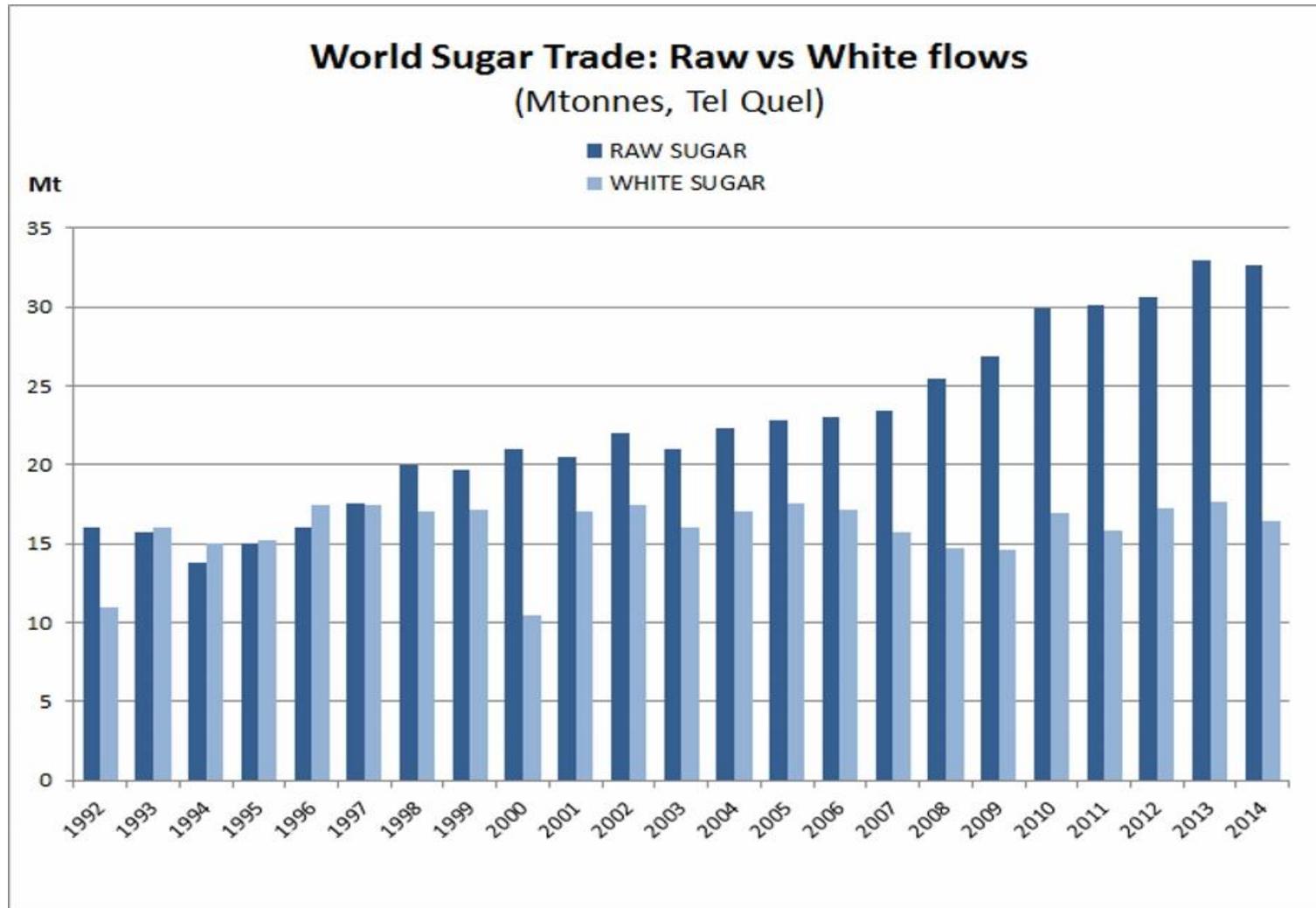


# Main Trades/Voyages - raws

World's top 5 sugar producers (Brazil, India, EU, Thailand, China)



# The Overall Growth in demand



## Commonly used terms in the sugar trade

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- ICUMSA - International Commission for Uniform Methods of Sugar Analysis.

Expresses the purity of the sugar in solution as a figure and is directly related to the colour. Generally, the lower the figure the whiter the colour.

- Polarisation

An indication of the sucrose content (quality) of the sugar. Polarisation is expressed in terms of percentage. The higher the percentage the higher the quality.

- Crystallisation

Growth of sugar crystals. More relevant when extracting sugar from beet.

# Sugar Associations

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The Sugar Association of London (raws) objectives shall be to provide:-

- (a) For the proper conduct of the Raw Sugar Trade.
- (b) The Support and protection of the interests of the Raw Sugar Trade in general.
- (c) Rules and conditions for contracts connected therewith.
- (d) Rules for the landing, weighing, taring, sampling and polarising of raw sugar.
- (e) For settlement by commercial arbitration of disputes referred to the Association.
- (f) For the assessment of contract losses when requested by Members and their Insurers to do so.

The Refined Sugar Association (whites) objectives shall be to provide:-

- (a) For the proper conduct of the White Sugar Trade,
- (b) Rules and contract conditions connected therewith,
- (c) Arbitrators for the settlement of disputes by commercial arbitration,
- (d) For the assessment of contract losses when requested by Members and their Insurers to do so,
- (e) The support and protection of the interests of Members and the White Sugar Trade in general.

## Sugar Associations - continued

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Section 117 of the rules refer to insurance requirements :

For CIF contracts Marine, Strikes and War Risk Insurance shall be effected by the Seller from warehouse to warehouse at the contract price plus five per cent on the full shipping weight with Lloyd's and/or first class insurance companies on:-

Institute Commodity Trades Clauses (A) - CL 275

Institute Strikes Clauses (Commodity Trades) - CL 279

Institute War Clauses (Commodity Trades) - CL 278

Institute Radioactive Contamination, Chemical, Biological, Bio-Chemical and Electromagnetic Weapons Exclusion Clause – CL 370

Institute Cyber Attack Exclusion Clause – CL 380

Termination of Transit Clause (Terrorism).

# Main Insuring Clauses

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Against all risks of physical loss and/or damage from any external cause, howsoever arising subject to Institute Commodity Trades Clauses (A) CL. 275 5.9.83.

The use of the Commodity Trades Clauses is on the decline and are gradually being replaced by the use of the Institute Cargo Clauses (A) CL.1.1.09.

Deductible wording:

For the purpose of establishing the amount of loss in the case of sugar damaged while covered by this insurance, the quantitative loss shall be the difference between the outturn weight and the Bill of Lading weight less the normal loss of weight as determined by the refiner's records for the last three (3) sound arrivals of raw centrifugal sugar within the previous twelve (12) month period from the same country of origin; in case of an insufficient number of previous sound arrivals, normal loss of weight is deemed to be one-half of one percent.

## Risk factors - raws

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Raw sugar absorbs moisture from the outside air and experience has shown that raw sugar should be ventilated during transit.

In addition the following issues can occur :

- Self-heating / Spontaneous combustion – where sugar is shipped with a high moisture content.
- Odour – preceding cargoes?
- Contamination – proceeding cargoes? What cargo is loaded into other holds?
- Shrinkage / Shortage
- Insect infestation / Diseases

## Risk factors - white

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The carriage of refined (crystal) sugar, unlike semi-refined or raw sugar, refined sugar is always carried in bags. In the past, jute outer bags were widely used with a polyethylene film inner bag. Nowadays the outer bags are often made from woven polypropylene. The purpose of the plastic inner bag is to keep out moisture but because the outer and inner bags are often stitched together, the seal is not always effective.

Refined sugar is normally a dry, free-flowing commodity with very low moisture content. If the sugar is found on delivery not to be free flowing, it is important to establish whether this is due to:

- 1) Pressure compacting
- 2) Stickiness
- 3) Caking

## Risk factors – white (continued)

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Pressure compacting usually occurs as a result of static pressure exerted by the weight of the sugar itself, especially when bags are stacked high. This condition can readily be corrected when the bags are handled and moved around. However, stickiness and caking of refined sugar are both the result of too high a moisture content and possibly to some extent, the temperature of the cargo at the time of bagging.

Stickiness, resulting in poor flow characteristics, occurs as a result of high moisture content, either initially or after packing.

Caking may occur when over moist sugar dries out.

## Perils to be aware of when insuring sugar - general

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Sugar is a hygroscopic cargo, meaning that it can lose or gain weight due to atmospheric moisture levels. Special care should be taken to ensure cargoes are weighed when the sugar is in equilibrium with atmospheric humidity. For instance, sugar which has been packed in a relative humidity of say 65%, may well await shipment in a relative humidity of 85%, and will come to equilibrium with the atmosphere and, to all intents and purposes, the sugar will appear to be unaffected. After loading into the vessel, however, the relative humidity of the atmosphere may fall to 65%, and under these circumstances the sugar will lose moisture. During this process it will dry and cake.

One needs to minimise the effects of ships sweat and cargo sweat which is particularly relevant to shipments of raw sugar as the main voyages are from warmer to cooler climates and visa versa.

Caking - "Caking" is the change from a free flowing granular product to one containing agglomerated crystals or lumps. It is caused by the migration of moisture within the stored sugar across the crystals. This peril is very closely linked to the hygroscopic nature of sugar. Sugar must be shipped at the correct moisture levels.

## Perils to be aware of when insuring sugar - continued

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Loss of polarisation - When damaged by fresh or salt water, sugar should not be considered a total loss, as the quantity remaining after draining should show little loss in polarisation; sugar remaining after draining should show a greater degree of polarisation than when wet. Cases have been known where sugar which had been totally submerged showed only a small loss in polarisation. If local facilities are available for re-refining, it is in the best interests of all concerned to have the damaged sugar forwarded immediately to the refinery for reprocessing

## Perils to be aware of when insuring sugar - continued

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Bulk sugar can generate very fine particles. There have been a number of instances of fire and/or explosions as a result. This is more likely to happen at storage facilities where the sugar is being moved – such as port warehouse facilities. Sugar does not spontaneously combust but there have been instances where wet damage has resulted in the “heating” of the sugar in the hold of the vessel.

Instances of General Average and Salvage do not tend to be above normal levels. As mentioned previously, the quality of vessels used tend to be on the better side due to the established voyages involved.

Theft – is an issue for white sugar in bags and tends to occur during the inland transportation leg of a transit, ie. Via truck and/or rail. Rarely an issue with raw sugar as raw sugar without refining cannot be used.

## Perils to be aware of when insuring sugar - continued

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Overall, the insurance of sugar, when underwritten correctly, causes few problems when compared to other commodities shipped in bulk and should perform well for Insurers.

# You do not want to see this happen to your sugar!

Copersucar's warehouses in Santos goes up in flames igniting 180,000mt of raw sugar



Or this!

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Or this!!



## Stowage precautions – bagged white

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- The ship's holds before loading, should be clean, dry and free from any noticeable smell.
- Bags should be loaded only if outwardly dry with no apparent lumpiness of the contents
- No bags to be loaded during any form of precipitation including rain or snow
- Cargo battens are not essential: where no battens are fitted, measures should be taken to prevent damage from any protruding cargo batten hooks or fittings.
- A separation of polyethylene or polypropylene cloth or paper sheeting between the ship's structure and the bags is sufficient.
- Tight block-stowage is the customary and acceptable method of stowage.
- If additional cargo is to be carried in the same hold as refined sugar, then this should be 'dry' cargo.
- The holds should not be ventilated: all ventilators and other openings should be sealed.
- The rapid discharge of any bags which may have been loaded at substantially lower temperatures than at the discharge port, is necessary, in order to prevent or restrict unwanted condensation on the bags during discharge.

# Stowage precautions – bulk raws

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- Ensure cleanliness of holds
- Hatch covers and seals to be checked and repairs made where necessary prior to load of cargo
- Ensure correct measuring of cargo takes place – recommended use of established draft survey practice as well as port hopper/weigh scales measurement
- Check to ensure port weigh sales and load and discharge are accurate- seek sight of weighscale certificate.
- Ensure correct separation of cargoes

# SA Sugar Terminal, Maydon Wharf, Durban

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**Thank you and any  
questions?**

