

Name

Professor

Course

Date

OrkaGreat Case Study

Review of the situation

Orkagreat is well standing company that has been conducting business for ten years. They need a packaging review for them to transport a hazardous material (coating solution). Since OrkaGreat is transporting a liquid that is hazardous, it is important for them to adhere to Hazmat packaging regulations that are provided. Their packaging should include proper labeling based the provided regulations, which is trivial for the security of their business. More so there is the need to come up with a new packaging form different from the ones that have been used in the past. Since the material is being transported through the highway, the client also needs to adhere to the highway regulations for hazmat. The provision of the product information is the first step in achieving their packaging requirements.

Product Information

According to the provisions of the table for hazardous materials, the product identification has met the criteria. The product is identified as coating solution with the identification number UN1139 located in the packing group 1 and has a specific gravity of 1. This is because the name has been formulated according to the regulations in column 2 (10) which require that materials be identified as solutions or mixtures if they have a combination of two or more hazardous chemicals. Also, the identification number starts with a UN hence making the shipping name proper according to the regulations by column 4 of the Hazardous

materials table. Also based on the regulations the product identification information provides all the necessary regulations as provided by the table. As such, all the information regarding the product is clear and understandable. As such, the product is suitable packaging labelling and shipment.

Packaging Possibilities

From the investigation made on the regulatory limitations, the two packaging belong to the non-bulk category. This therefore means that the packages will conform to the non-bulk regulations. The provisions that apply are provided in column 8 of the hazardous material table. The provisions demand that the manufacture and packaging methods that could be dangerous be investigated prior to packaging. Also, the regulations apply to all modes of transportation. Damaged packages are that pose risks to the transport or storage facility will be put in other salvage drums with metal or plastic lids and taken back for repackaging or disposal. When filling liquid materials, there is required air space to avoid spilling. It also stated that the liquid packages face upwards and be provided with cushioning. The exception indicates that group I liquids package can also be used for group II material with a specific gravity of not more 1.8. The first choice packaging includes use of plastic containers for the 1-liter package and metal gallons for the 30-liter package. The alternatives include a drum and cylinder for the 30-liter package and metal jerry can for the 1-liter package.

Size Considerations

The change in sizes will not be suitable for customers as set in the case where the customers are content with these sizes. It might also bring about confusion to the customers due to the sizes they were already used to. As such, I would not advise OkaGreat to change their sizes. This is because the sizes currently available are convenient. Although the sizes will not

affect the packaging design, there will be extra charges incurred for repackaging. This is because there will be packaging and repackaging and hence extra charges. As described by the packaging provisions there will be newly available packaging styles for the changed sizes. This is because the only criteria to be met include the bulky and non-bulky packaging.

Package Design

The first choice design for the 35-liter package will include a metal gallon that should have a plastic lid. This is because the hazardous material is a liquid and, therefore, packing in wood or plastic container is not convenient due to high chances of spillage. However, the cushioning could be made of wood to avoid friction. The first choice for the 1-liter package is a plastic container, which is most convenient due to the size. The cushioning can be wood because it prevents friction against the storage or transport facility.

Labelling and Marking

It is important that the two packages are marked and labelled such that they are clearly visible. The information that needs to be shown from the 30 liters packs includes the name and address of the transporter, the name of the receiver and also the respective address. The proper shipping name of the package should also be indicated on both the packages. Another important piece of information that should be indicated on the package is the storage temperature and the name of the refrigerant where applicable. Also, there are two types of labels both which should be used on the packages. The first label is the hazard labels which is a requirement for all the hazardous materials. In this case, the hazard label is a square which is set at an angle of 45 degrees.

Other specific labels may be incorporated where applicable. Another label that should be included is the orientation label with the words "THIS SIDE UP". The label should be indicated

in the two opposite sides of the package with the arrows pointing in the right direction. In the same regard, various shipping documents will be necessary for Orkagreat. One of the documents is that the declaration for dangerous goods should be prepared and signed by the shipper. The other document is the invoice that will include a packing list, with receivers address, details of the contents as well as the number of the packages to be transported. The weight and the value of the package should also be indicated and signed by the shipper.

Test plan for the 35-liter package

For this type of package, some of the tests have to be carried out to ensure efficiency and safety when transporting. Some of the tests include drop test, leak-proof test, chemical compatibility test as well as the hydrostatic pressure test. More so there is the package test that will entail design qualification, periodic retesting as well as production testing. The manufacturer of package should provide the requirements which conform to the conditions of manufacturing. There is also the need to establish a package identification code that has the three main components including the type of packaging, the material that is used for construction as well as the category of packaging.

The correct classification, packaging, documentation as well as labelling of the chemical substance is the responsibility of the shipper. More so the efficient transport of the package requires proper coordination between the senders the transporters and the recipients. The reason is to ensure that the safety of the package is promoted throughout the process. As such proper communication between the interested parties will be important such that a good working relationship ensues. The effectiveness of the process will require that the responsibilities of the sender, carrier and the recipient to be clearly outlined. The sender will, therefore, make the advance arrangements including the needs for the various permits. Since the means of transport

is already established, it is important to ensure that they are in order and that the most direct route is the one that will be undertaken. The responsibility of the carrier, on the other hand, would include providing advice to the sender regarding the requirements for the transportation of the package. Also, the carrier may also provide valuable packaging advice to both the sender and the recipient. The role of the carrier also entails maintaining the documentation in case there is the need of archiving. Most importantly the carrier provides assistance in arranging and the correct packaging. The responsibility of the receiver is to obtain the necessary authority to ensure that the collection of the package is timely efficient.

Training

To effectively transport the packages it is imperative that all the personnel involved in the transport of the package to be taken through the required training. In this case, all the personnel will have to undergo the training in line with the modal requirements. In this regard, examinations should be administered after the course of training such that there is assurance of passing all the requirements. The training and awareness can be conducted via the consultation of the guidance documents. Orkagreat therefore should train all the workers and the employees on the appropriate procedures to handle the chemical substances. The carrier companies should also train their personnel on how to address issues of spills as well as protection from cases of exposure. Apart from the general awareness, it is also important to conduct security train coupled with function specific training to enlighten all the employees on the security risks that are associated with the chemical materials. The other information that the employees need to be trained on is how to handle damages particularly in the cases of accidents leading to spillage. Such training will assist prevent and reduce the occurrences of damage.