

# Toyota Material Handling Group (TMHG) UK Ltd Annual DGSA Audit for April 2024

To be kept till April 2029

AJS HAZ TRaining

# DGSA ANNUAL REPORT FOR 2024

Report period 01<sup>st</sup> April 2023 – 31<sup>st</sup> March 2024

**TO BE RETAINED FOR 5 YEARS**  
**Not to be destroyed until April 2029**

## Introduction

This is the Dangerous Goods safety Advisor (DGSA) annual report as required by section 1.8.3.3 of ADR and Regulation 5 of SI 1348. It is based on a surveillance visit and audit carried out at Toyota Material Handling Group LTD, Warrington, to assess with their compliance in respect to the transport of dangerous goods in accordance with national and international regulations (SI 1348 & ADR) on the 11<sup>th</sup> of March 2024

Toyota Material Handling Group (TMHG) UK Ltd operate as suppliers of various forklift trucks, powered pallet lifters and various material handling equipment, the group have the following areas of specialty:

### **Toyota Material Handling UK Ltd Warrington**

Supplier of material handling equipment, assembly, maintenance and repair of various material handling equipment and carrier of equipment for delivery and collection from end users.

### **Toyota Material Handling UK Ltd Castleford**

Supplier of material handling equipment, assembly, maintenance and repair of various material handling equipment and carrier of equipment for delivery and collection from end users.

### **Toyota Material Handling UK Ltd Old Dalby**

Storage, servicing and repair of associated material handling equipment and final disposal of equipment at end of life, together with battery refurbishment area for the handling of lead acid battery packs and the customisation of equipment to meet specific requirements of the customer with a spare parts storage area.

### **Toyota Material Handling UK Ltd Leicester**

The Sale and supply of spares from the centralised stores facility to other TMHG sites and sales and fleet management for Toyota and providing onsite servicing/repair of Toyota material handling equipment to the customer from the Leicester centre. The Leicester site also houses the TMHG training facility for the training of forklift operators and demonstration of MHE equipment.

Toyota material handling UK supply and maintain the material handling equipment for sale and rent to a multitude of undertaking across UK wide. Toyota material handling receive completed and modified equipment from production facilities located in France, Sweden and Italy and supply spare parts and after sales maintenance support across the UK from their sites. Toyota Material Handling UK also operate a fleet of LGV's to deliver and collect equipment from customers across the UK.

Toyota Material handling UK are accredited to the following:

FORS (Bronze) Fleet Operator Recognition System

ISO 9001:2015 Quality Management System

ISO 14001:2015 Environmental Management System

ISO 45001:2018 Certificate of Health & Safety Management

ISO 50001:2018 Energy Management System

Present during the DGSA audit from Toyota Material Handling UK were:

Darren Jones  
Transport and Logistic Manager,  
Toyota Material handling UK

Representing AJS HAZ Training  
Andrew Shylan  
DGSA, RPS, TechIOSH, AIIRSM

## 1. IDENTIFICATION OF THE COMPANY (companies).

1.1. Company name. Toyota Material Handling UK Ltd (Group)

1.2 Company address  
Toyota Material Handling UK Ltd  
6 Kingsland Grange  
Woolston  
Warrington  
WA1 4RW  
UK.

1.3 Telephone number +44 7385 088064

## 2. DANGEROUS GOODS SAFETY ADVISOR DETAILS.

2.1 DGSA Name Andrew Shylan.  
DGSA CERT No 2886145/201029 Valid to 27/10/2025.

2.2 DGSA Company Name AJS HAZ Training

2.3 DGSA Companies address  
112 West Heath  
Farnborough  
Hampshire  
GU14 8QY UK

2.4 Telephone number 07816 985483 (mobile)

## 3. DESCRIPTION OF RELEVANT ACTIVITY AND OF THE MODES OF TRANSPORT.

Activity		Mode of Transport	
Unloading operation	X	Road	X
Loading operation	X	Railway	
Filling Tanks		Sea Containers	
Packing	X	Sea RO-RO Ferry	X
Transport (Carrier)	X	Air	
Freight Forwarder/Courier		Inland Waterway	
Warehousing	X	Euro tunnel	

#### 4. INFORMATION ON THE RELEVANT DANGEROUS GOODS AND OPERATIONS

##### 4.1. Territorial range of the activities of the company

UK Only	X	
UK & Ireland		
Other ADR Members		
Outside Europe		
Others		

##### 4.2. Transport mode used

Road	X	Using own vehicle fleet
Railway		
Waterways		
Sea	X	Ro-Ro Vehicle ferry (goods in)
Others	X	GXO Logistics and DB Schenker

##### 4.3. Unloading (incoming goods)

Class The following classes are transported.	UN Numbers	Type of containment (receptacle, tank, ...)	Quantity * Approx tonnage per year			
			<25T	<100T	<500	>1000T
Class 1 (1.1, 1.2, 1.3, 1.4, 1.5, 1.6)	Nil	Dangerous goods are articles, or vehicles and equipment powered by class 2.1, 3, 8 or 9 UN 3166 UN 3171				
Class 2 (2.1, 2.2, 2.3)	UN 1950 Aerosols, Class 2.1 & 2.2					
Class 3	See below					
Class 4 (4.1, 4.2, 4.3)	Nil					
Class 5 (5.1, 5.2)	Nil					
Class 6 (6.1, 6.2)	Nil					
Class 7	Nil					
Class 8	UN 2794					
Class 9	UN 3480 UN 3481					

There are other dangerous goods that are used on site for the repair and maintenance of the material handling equipment including the following:

UN 1860 Resin Solutions, Class 3  
 UN 1263 Paint, Class 3  
 UN 1044 Fire extinguishers, Class 2.2  
 UN 1993 Flammable Liquid N.O.S, Class 3  
 UN 3164 Articles Pressurised, pneumatic or hydraulic, Class 2.2  
 UN 3077 Environmentally hazardous substances solid, N.O.S. Class 9  
 UN 3082 Environmentally hazardous substances liquid, N.O.S. Class 9  
 UN 3090 Lithium metal batteries, Class 9  
 UN 3091 Lithium metal batteries contained in equipment, Class 9  
 UN 0283 Boosters, Class 1.2D, these were not present or seen during the audit

These substances and articles are stored in COSHH fireproof lockers on several sites and quantities of these substances are held at the Leicester warehouse, many of these substances are stored and transported as limited quantities and used by the mobile technicians and maintenance personnel on the Warrington, Castleford, and Old Dalby sites. The COSHH lockers display Global Harmonised System (GHS) labels. GHS warning labels to identify COSHH storage containers/storage lockers as show below:



Several sites have gas cylinder storage cages for LPG gas cylinders used for the propulsion of several types of forklifts.

Recommended that the gas cylinder cages are signed with the following from direction of approach and are secured at all times, when unattended to prevent unauthorised access to the cages.



#### 4.4. Loading (outgoing goods) See Annex E for further information

Class The following classes are transported.	UN Numbers	Type of containment (receptacle, tank, ...)	Quantity * Approx tonnage per year			
			<25T	<100T	<500	>1000T
Class 1 (1.1, 1.2, 1.3, 1.4, 1.5, 1.6) Class 2 (2.1, 2.2, 2.3) Class 3 Class 4 (4.1, 4.2, 4.3) Class 5 (5.1, 5.2) Class 6 (6.1, 6.2) Class 7 Class 8 Class 9	UN 3166 UN 2794 UN 3171 UN 3480 UN 3481	All dangerous goods contained or packed by various manufactures or on site				

#### 4.5. Comparison of Hazardous goods by weight/Quantity 2023-24

Class	2023	2024	Difference	Increase/decrease
No figures were asked for as most dangerous goods are contained in articles and various vehicles.				

## 5. PACKAGING/TANK TYPES.

Details of packing types used for each product, inspections, expiry dates as relevant. Many of the class 8 and class 9 batteries are contained in well-constructed frames and containment devices to enable handling by forklift and hoist for fitting into various type of material handling equipment. A selection of lithium-ion batteries, UN 3480 are supplied in various UN certified packaging from China and Norway.

The following UN certified packages were seen and inspected during the audit:

Ⓡ 4G/Y11/S/22/CN/C231710 PI:005

These UN certified and approved boxes contain a single 864-Watt hour lithium-ion battery for fitting into the BT Tyro pallet lifter

These boxes containing the 864-Watt hour battery must be correctly marked and labelled for the battery contained within the packaging, this has been carried out by another part of the Toyota Material Handling Group in Europe (see fig 1 below).

Figure 1 Incorrectly marked and labelled package.



Figure 2 Correctly marked and labelled package.



The lithium battery mark must only be applied to packages complying with special provision 188 and contain lithium-ion batteries with a watt hour rating of 100-Watt hours or less or lithium-ion cells with a watt hour rating of 20 watt hours or less, they must never be affixed to a package containing lithium ion batteries exceeding 100 watt hours. Lithium battery mark (see fig 3) for special provision 188, this mark must not be displayed as well as the lithium battery label for surface transport.

Fig 3



Lithium Battery mark



Lithium Battery label

Ⓡ 4G/Y7.5/S/21/N/NET3295C

This package tested by the Norwegian Competent authority for the use of a single lithium-ion battery, the package is manufactured by DS Smith, Packaging Sweden AB, Bangårdsgaten 2-4, SE-331 26 Värnamo Sweden.



Several of these packages were seen at the Leicester warehouse site containing new lithium-ion batteries correctly marked and labelled for the Cesab's Lithium-Ion Battery contained within as per packing instruction 903 (1).

Ⓢ 4G/X53/S/21/N/NET3278C  
4GV/X30/S/21/N/NET3275C

This package is again tested by the Norwegian competent authority and produced by DS Smith, Packaging of Sweden. Examples of the above packaging were found at the Leicester warehouse facility and were being used for defective batteries being returned by the group's technicians using the 4GV code which is acceptable as long as the battery is packed into a plastic bag or inner packaging before placing into UN certified outer packaging.

#### Mandatory requirements

The packaging that is used to return defective batteries for disposal must show the following mandatory information. "UN 3480" and be marked "LITHIUM BATTERIES FOR DISPOSAL" or "LITHIUM BATTERIES FOR RECYCLING" & Class 9 lithium battery label,



Lithium Battery label



Fig 4

Several boxes of the following type are held by TMHG on the Leicester parts and spares site for the transport of damaged or defective Lithium-ion batteries to comply with Packing instruction 911 of the surface dangerous goods regulations.

Ⓢ 4A/X141/S/20/D/BAM15468-LogBatt

This package is tested by the German (BAM) competent authority and a certificate has been located, the package is manufactured by LogBATT GmbH Waldstraße 30 D - 73773 Aichwald, Germany. This package is designed and tested to comply with Packing instruction 911 of the ADR/IMDG Codes for prototype or damaged/defective batteries to comply with surface and air transport.

Box Serial number 20M20173 was present during the audit.

#### Mandatory requirements

Battery boxes must be marked with the Class 9 Lithium battery label and be marked with "UN 3480" and "DAMAGED/DEFECTIVE LITHIUM-ION BATTERIES"

#### Recommendation

All the serial numbers for the Safety Batt boxes should be held by TMHG and the box's locations and condition recorded.

The following certified plastic drum was seen at the Leicester site.

Ⓢ 1H2/X88/S/D/21/BAM8631-M8

The plastic drums are approved by the German competent authority and produced by Mauser UK Ltd., Ut 3, Greenvale BP Todmorden Rd, Littleborough, L15 9EG, GB. The

drums are currently used by TMHG for the disposal of used batteries for recycling/disposal and comply with packing instruction P909 of the ADR/IMDG Codes.

### **Waste acid batteries packed for Disposal.**

A waste container for the storage of batteries for disposal was seen on the Warrington site the container contained several lead acid batteries and lithium batteries awaiting collection for disposal.

Recommended that wet acid storage batteries are separated from lithium batteries when awaiting disposal.

ADR states that used lead acid batteries are not subject to the regulations if they meet the following requirements:

Their cases are undamaged.

They are secured in such away they cannot leak, slip, fall or be damaged, e.g. stacked on pallets

There are no traces of acid on the outside of the batteries.

They are protected from short circuit.

The batteries as seen were not secured inside the plastic pallet and were not protected from short circuit and are there fore subject to the ADR regulations.

If the batteries are subject to the regulations, they must be packed to Packing instruction P801.

P801 states the batteries can be packed in plastic bins or pallet boxes as long as they comply with the following:

- a. The bins shall be resistant to the electrolyte that was contained in the batteries.
- b. The bins shall not be filled to a height greater than the height of their sides
- c. The outside of the bins shall be free of any residues of electrolyte
- d. Under normal conditions of carriage, no electrolyte shall leak from the bins
- e. Measures shall be taken to ensure the filled bins cannot lose their contents (lids fitted)
- f. Measures must be taken to prevent short circuit (batteries discharged, terminals protected etc.)
- g. The bins will be transported either covered on a vehicle or carried in a closed and sheeted vehicle.

### **Limited Quantity Packaging**

THMG UK package several substances and articles using the limited quantity exemptions, the outer packaging appears to be of good quality and will be robust enough for the normal conditions of transport, however the packages must be marked with the limited quantity mark as shown in Fig 5. Below.

The mark must be a black diamond on a contrasting background or white background (see fig 6.) of 100 mm x 100 mm and be on its point, but orientation arrows are require on the outside of any package containing liquids in inner. The orientation arrows must be displayed on two opposite side or ends of the boxes.



**Fig 5.**



**Fig 6.**



Limited quantity marks may be reduced to 50mm x 50mm if the package is not large enough for the 100mm x 100mm.

### **Summary.**

The batteries are received into the various sites with the lead acid batteries or Lithium-ion batteries fitted into a heavy-duty frame/handling device constructed of steel to protect the lithium-ion batteries (UN3480) or the lead acid batteries (UN2794) from damage in transport and to allow for fitting of the batteries directly into the material handling equipment. The other types of dangerous goods are UN 3166 Vehicles Flammable Gas powered or Flammable liquid powered or UN 3171 Battery Powered Vehicle and are transported to the end user or collected with the dangerous goods contained in fuel tanks fitted to the vehicles or in gas cylinders fitted on the vehicles and class 8 acid battery packs or class 9 lithium-ion battery packs contained within the material handling equipment. Several types of lithium-ion batteries (UN3480) are fitted into the electrically powered pallet transporters, but spare batteries are received into the various sites from Europe packed by the manufacturer of the batteries. Certificates of approval for the packages used are in Annex F and guidance on UN numbers and proper shipping names are in Annex E

## **6. VEHICLE FLEET DETAILS.**

Details of company owned vehicles, trailers and tanks including inspection details. Toyota Material Handling UK, have a fleet of domestic LGV's for the transport of equipment and vehicles to and from the end users, these vehicles and drivers are used for the transport of UN 3166 and UN 3171 that when meeting the provisions of special provision 666 of ADR are not subject to the provision of the ADR regulations. When transporting dangerous goods TMHG use the services of GXO logistics who use ADR equipped vehicles and maintain the training of their ADR drivers. There are no currently approved vehicles EX II/III (for the carriage of explosives), FL, AT (for the carriage of tanks) or MEMU and will not require the additional ADR annual inspections as per ADR Part 9.

### **Summary.**

The vehicle fleet is modern and maintained by outside fleet management contract, daily checks and all mandatory road worthiness checks have been carried out and records kept at the TMHG Warrington site. Some vehicles are fitted with ADR orange plates and fire extinguisher to comply with CDGUTPE/ADR when loads exceed the ADR threshold limit are dispatched by GXO logistics. Various couriers are used for express delivery of spares and small quantities of UN 3480 lithium-ion batteries. TMHG operate a fleet of small vans for the transport of spares and carry out maintenance and repair tasks across the UK and are operated by the groups qualified technician, these vehicles when required, carry defective batteries back to the group or awaits collection and disposal as required. There have been several occurrences where third party carrier are arriving at the Warrington site carrying several lithium-ion batteries and the vehicles have not been ADR compliant with regards to the vehicle driver training and vehicle orange plating.

## 7. LIST OF NOTIFIED INCIDENTS OCCURRED DURING THE YEAR IN TRANSPORT, LOADING OR UNLOADING.

7.1 Summary of accidents/incidents involving dangerous goods and any occurrence mentioned in Chap 1.8.5 of ADR

Date	Place of incident	Short description

### Summary.

No incidents or accidents are recorded as of the 11<sup>th</sup> of April 2024, all incidents involving dangerous substances or articles should be notified to the DGSA acting on behalf of the undertaking as soon as possible so that an investigation and report can be drafted and held by undertaking or forwarded to the UK competent authority (DfT) Dangerous goods office. Incidents must be reported as soon as possible but at the latest one month from the occurrence by completing the online report at [forms.dft.gov.uk](https://forms.dft.gov.uk) by the undertakings DGSA

Reportable instances include loss of product or containment.

Loss of product means the release of dangerous goods:

- of transport category 0 or 1 in quantities of 50 kg/50 l or more
- of transport category 2 in quantities of 333 kg/333 l or more
- of transport category 3 or 4 in quantities of 1000 kg/1000 l or more.

Reporting of dangerous goods incidents should not be confused with the requirements or RIDDOR 2013 to report workplace accidents and incidents.

Incidents involving GXO logistics to be investigated by GXO logistics DGSA

## 8. TRAINING.

8.1. Details of all training according to chap 1.3 of ADR covering General awareness training, Function specific training and safety training.

General awareness training Chap 1.3.2.1 ADR		
Name of employee	Date of training expiry	Certificate/record held
Various employees	Held electronically	Held electronically

Driver ADR VTC Chap 8.2 ADR		
Name of employee	Date of training	Run out date
Small number of GXO drivers	Held on data base by GXO	Held on data base by GXO

Consignor training (function specific) Chap 1.3.2.2 ADR		
Name of employee	Date of training	Certificate/record held
<p>TMHG staff have received consignor/consignee/carrier function specific training qualifications for ADR as per Chapter 1.3 of ADR</p> <p>TMHG have several staff from different sites currently holding function specific training qualifications for IMDG Code as per Chapter 1.3 of the IMO IMDG Code.</p> <p>The above training was carried out by myself as AJS HAZ Training and records are held of all staff trained on the 29<sup>th</sup>-30<sup>th</sup> November 2022 and 1<sup>st</sup>-2<sup>nd</sup> December 2022</p>		

DGSA Chap 1.8.3.7 ADR		
Name of employee	Date of training	Certificate/record held
ANDREW SHYLAN AJS HAZ Training	29 November 2020	Held by AJS HAZ Training, copy provided to TMHG UK

Safety training Chap 1.3.2.3 ADR		
Name of employee	Date of training	Certificate/record held
Staff receive safety/manual handling/fire and first aid training as required records held electronically by Toyota Material Handling UK of all safety training taken.		

8.2. Number of employees involved in packing, loading, filling, unloading, consigning and transport.

Toyota Technicians and warehouse staff are involved in packing of lead acid and lithium-ion battery packs to send to customers or return from fault diagnosis of battery packs on customer site, and several employees are trained with regarding loading and unloading and load securing of loads/vehicles onto vehicles as warehouse staff or drivers.

### Summary.

The undertaking trains all staff when required with awareness and safety training, they also ensure that staff with driving duties maintain ADR awareness training, this training is currently an online training course which although dated is adequate and fit for purpose.

There are currently several staff at various sites who have received up to date dangerous goods consignor or consignee training in accordance with ADR Chapter 1.3.2.2 and IMDG Code, Chapter 1.3 in compliance of regulation 5 of the statutory instrument (act of parliament) SI 1348 Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDGTUPE) as amended 2011/2020.

Training records of all individuals who have undertaken function specific ADR or IMDG Code training must be held by TMHG UK until training has been recertified, expired, or the employee has left the undertaking. It is also strongly recommended that members of TMHG UK receive training in the use of the International Maritime and Dangerous Goods Code to allow the transport of dangerous goods back to Europe by sea using cross channel ferries if they undertake any duties where dangerous goods are transported by road or sea.

## 9. INFRINGEMENTS

9.1. Provide a summary of enforcement action taken by enforcement authorities. There are no recorded enforcement prosecutions, fixed penalties, or probation notices against the undertaking by any competent authorities. A check has been carried out from June 2021- Aug 2022 on the HSE web site:

<https://www.hse.gov.uk/enforce/cdg-notice.htm>

No information from August 2022 has been uploaded by the HSE and checks could not be carried out from Sept 22-April 23.

### Summary.

No infringements are recorded or declared as at the time of the DGSA audit, any infringements must be declared in relation to dangerous goods being carried through all states by any of the contracting parties of the ADR's competent authorities.

## 10. SECURITY.

10.1. Provide details regarding compliance with the requirements of Chap 1.10 ADR. No dangerous goods carried fall within scope of the security provisions of Chap 1.10 ADR or Chap 1.5 of the IMDG Codes

### Summary.

No goods currently fall within the scope of the High Consequence Dangerous Goods (HCDG) security provisions and TMHG do not require a security plan.

It is advisable that staff with a specific job function handling sensitive information are subject to a 5-year background check and proof of identity and should receive security training as required.

For more information see below.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/918947/guidance-secure-carriage-dangerous-goods-road-rail.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918947/guidance-secure-carriage-dangerous-goods-road-rail.pdf)

## 11. GENERAL INFORMATION ON THE ACTIVITIES OF THE SAFETY ADVISOR

Duty of the DGSA	Applicable
11.1. Internal audits to check compliance with the requirements governing the carriage of dangerous goods. Any audit done by non-DGSA but related to transport of dangerous goods should be mentioned.	X
Comments: All DGSA annual reports must be held for a minimum of 5 years and must be made available to the UK competent authorities and enforcement agencies on request as well as the name and contact details of the current DGSA in line with current legislation. TMHG only hold three annual reports at the current time, the lack of reports can be attributed to the fact that TMHG UK were only transporting dangerous goods in equipment and were using the exemptions in previous ADR regulations prior to 2021.	
11.2. Advises given to his undertaking on the carriage of dangerous goods. Duties of a DGSA Annex A	X
Comments: No set of any surface regulations were seen during annual audit.  ADR 2023 held, will be replaced by ADR 2025 in January 2025 but will become mandatory from July 1 <sup>st</sup> , 2025 ADR is available online at the following:  <a href="https://www.unece.org/trans/danger/danger.html">https://www.unece.org/trans/danger/danger.html</a>  Euro tunnel available from:  <a href="https://www.eurotunnelfreight.com/uploadedfiles/xnt/adr_2023_uk.pdf">https://www.eurotunnelfreight.com/uploadedfiles/xnt/adr_2023_uk.pdf</a>  Eurotunnel regulations will normally update in July 2023.	

<p>No IMDG Dangerous Goods Code was seen or checked for updates during visit.</p> <p>The current IMDG Code 41-22 can be currently used until December 2025 and then the IMDG Code 42-24 will become mandatory, IMDG Code 42-24 may be voluntarily used from January 2025 by TMHG UK.</p> <p><a href="https://www.imo.org/en/publications/Pages/IMDG%20Code.aspx">https://www.imo.org/en/publications/Pages/IMDG%20Code.aspx</a></p>	
<p>11.3 Information about archiving of the previous and current annual report of the DGSA (needs to be available for the last 5 years).</p>	
<p>Comments: Toyota Material Handling Group UK informed that the DGSA audit must be kept for 5 years and held until April 2028, the undertaking. TMHG UK must hold five years of DGSA audits as hardcopy or electronically and make these audits available on request to the competent authorities (HSE, DVSA, Police or local authorities) and must provide details of their DGSA on request by the authorities on request.</p>	
<p>11.4. Monitoring of the procedures for compliance with the requirements governing the identification of dangerous goods being transported, including access to regulations.</p>	X
<p>Comments:</p> <p>The Toyota Material Handling Groups are to hold a hardcopy or electronic copy of the surface dangerous goods regulations, including the ADR ADR 2023 from July 2023, it is recommended that the UK statutory instruments and UK approved derogations and transitional provisions together with Eurotunnel regs are held by TMHG UK and staff are trained to use these regulations. All dangerous goods are identified and classified by the consignors and the undertaking uses information provided by third parties to comply with ADR Chapter 1.4.2.1.2.</p>	
<p>11.5. Monitoring of the undertaking's practice in taking account, when purchasing means of transport, of any specific requirements in connection with the dangerous goods being transported.</p>	X
<p>Comments:</p> <p>The vehicles are controlled by GXO Logistics and are responsible for the equipment on the vehicles and TMHG does not require any special requirements regarding their van fleet for the Toyota technicians apart from the ADR fit of a 2kg dry powder fire extinguisher as required for a cab fire and ensure the carriage does not exceed the ADR/UK vehicle threshold limit of 333 kg of lithium batteries per vehicle at any time.</p> <p>The ADR miscellaneous equipment must be checked at regular intervals for expiry date and general condition of equipment.</p> <p>Drivers must complete regular checks for serviceability of fire extinguishers that are fitted to vehicles and the extinguishers are replaced at end of service life (5 years) or when they become unserviceable.</p>	
<p>11.6. Monitoring of the procedures for checking the equipment used in connection with the carriage, loading or unloading of dangerous goods.</p>	X

<p>Comments: All MHE and vehicle equipment are inspected and maintained to current regulatory requirements and records of all testing/inspections are held but not checked during the audit.</p>	
<p>11.7. Monitoring of the proper training of the undertaking's employees and the maintenance of records of such training.</p>	X
<p>Comments: A training deficiency has been highlighted and the undertaking informed of this deficiency. See section 8.2.</p>	
<p>11.8. Monitoring of the implementation of proper emergency procedures in the event of any accident or incident that may affect safety during the carriage, loading or unloading of dangerous goods.</p>	X
<p>Comments: There is a spill and emergency procedures in the event of an accident or incident during loading/unloading or during transport operations held electronically (Safe working Practices SWP-19 Spillages) and located on some spill kit on some of the sites. It is recommended that spillage/pollution kits together with a container to place leaking damaged packages and training conducted with warehouse staff on spillage procedures and the correct PPE to be worn by those individuals dealing with the incident. A survey of any drains and manholes where dangerous goods can enter the sewers or local water course should be carried out. Recommended that a pollution plan be prepared in accordance with HSE/Environment Agency guidelines at the following: <a href="https://www.sepa.org.uk/have-media/60177/ppg-22-incident-response-dealing-with-spills.pdf">https://www.sepa.org.uk/have-media/60177/ppg-22-incident-response-dealing-with-spills.pdf</a>  A site plan can be assessed, and a plan put in place, if the spill occurs during transport operations this can prove more problematic and ensuring the vehicles are correctly plated and correct placards, drivers access to ADR miscellaneous equipment to deal with small spills if safe to do so, PPE, shovels. Collecting buckets and drain seals. Warehouse chemical spillage A warehouse spillage kit should be held within the warehouse and should be of adequate size for the biggest size of package received and dispatched by the warehouse, the spillage kit should consist of a bin with lid and various products (shovels, brooms, inert chemical absorbent materials, bags for disposal of contaminated items and cable ties to secure waste bags) to enable warehouse staff where safe to do so to isolate, contain, absorb, and recover small spillages of chemicals. Personal protective equipment of suitable type should be also provided, and location/s indicated and known to all warehouse staff.  Action to be taken by undertaking A review of all the sites spillage kits to be completed and all spill kits brought up to the same standard and stocked with sufficient inert pads, socks, and absorbent granules together with PPE for those using the spill kit and every</p>	



<p>spill kit to display a contents list and spill response instruction that is legible, readable, and located with each spill kit.</p> <p>Fire exits and signage. During the audit across all sites the fire exits, and their correct signage appear very good and clear and no obstructed fire exits were seen or audited. Safety advisor/fire wardens/marshals' information and fire risk assessments can be found at the below: <a href="https://www.firesafe.org.uk/fire-safety-in-factories-and-warehouses/">https://www.firesafe.org.uk/fire-safety-in-factories-and-warehouses/</a></p> <p>Temporary storage in warehouse During the audit there are various types of battery packs for material handling equipment and other dangerous goods being held, often temporarily or in the warehouse location, there is currently separate locations for the storage of Class 2.1 (flammable gas cylinders) dangerous goods to comply with the HAS guidance (HSG 71 storage of chemicals and HSG 76 Warehouse safety) that certain classes are kept apart even for temporary storage, see Annex E, this document can be found at the following: <a href="http://www.hse.gov.uk/pubns/priced/hsg71.pdf">http://www.hse.gov.uk/pubns/priced/hsg71.pdf</a> Warehouse safety guidance. <a href="http://www.hse.gov.uk/pubns/priced/hsg76.pdf">http://www.hse.gov.uk/pubns/priced/hsg76.pdf</a> Lithium battery packs are currently not separated within the warehouse facility but the goods receipt procedures and accounting for hazardous stores procedures were seen during the audit and were being carried out by warehouse staff. For further information on the risk control recommendations for the storage, handling, and use of batteries in the workplace see below: <a href="https://www.riscauthority.co.uk/resource-download/403">https://www.riscauthority.co.uk/resource-download/403</a></p>	
<p>11.9. Investigating and, where appropriate, preparing reports on serious accidents, incidents or serious infringements recorded during the carriage, loading, or unloading of dangerous goods.</p>	X
<p>Comments: See Section 7</p>	
<p>11.10. Monitoring the implementation of appropriate measures to avoid the recurrence of accidents, incidents, or serious infringements.</p>	X
<p>Comments: The undertaking is to make known to the DGSA any incidents/accidents involving dangerous goods to allow a full investigations and implementation of remedial action to take place. Staff should be encouraged to report any accident or more importantly any near miss with a "no blame" attached to allow through, timely and full investigation of any occurrences which did not conform to normal transport operations and could have resulted in an accident or unforeseen occurrence.</p>	
<p>11.11. Monitoring the account taken of the legal prescriptions and special requirements associated with the carriage of dangerous goods in the choice and use of sub-contractors or third parties.</p>	X

<p>Comments: Toyota Material Handling Group UK use a third party to dispose of any faulty or defective lead acid batteries and their refurbishment, this is currently carried out by Juice Stored Energy who maintain battery maintenance areas on the TMHG site at Old Dalby.</p> <p>Juice currently they do not deal with the lithium-ion battery packs which will mean a disposal/refurbishment policy which Toyota is already exploring to comply with their groups sustainability and resource accreditation and management policy.</p> <p>Juice Stored Energy do not currently consign batteries using Hazardous Waste Notes which must be kept for a minimum of 3 years but on a normal dangerous goods note, which must be kept for 3 months. The use of agency staff or sub-contractors must be controlled, and all relevant training and checks carried out prior to commencement of work activities.</p> <p>The segregation of waste lithium and wet acid batteries awaiting disposal should be followed and keep the number of batteries awaiting collection for disposal as low as possible on site.</p>	
<p>11.12. Verification that employees involved in the carriage, loading, or unloading of dangerous goods have detailed operational procedures and instructions.</p>	X
<p>Comments: Detailed procedures were seen during the audit, and risk assessment for the loading/unloading procedures carried out by the undertaking on their sites and detailed procedures exist for the delivery and unloading by the carrier.</p> <p>It is recommended that a risk assessment is carried out and written procedures for the safety of drivers, banksman and MHE users.</p> <p>Work traffic must be separated from pedestrians by marked floor areas within the warehouse and the loading/unloading areas outside being restricted to all but the essential employees/contractors and visitors.</p> <p>A workplace check list can be obtained from the following and will guide you to making your detailed guidance and risk assessment:</p> <p><a href="http://www.hse.gov.uk/workplacetransport/wtchk1.pdf">http://www.hse.gov.uk/workplacetransport/wtchk1.pdf</a></p> <p>see annex B</p>	
<p>11.13. Monitoring the introduction of measures to increase awareness of the risks inherent in the carriage, loading and unloading of dangerous goods.</p>	X
<p>Comments:</p> <p>Recommend a dangerous goods notice board in the warehouse, or an area accessed by the staff with a person nominated to keep the board updated and current with information and signage (Dangerous goods poster etc.).</p> <p>Refresher training given to staff as required but no longer than five-year intervals and records kept and updated for refresher training.</p> <p>Nominating various warehouse staff to be responsible for a small section of the warehouse regarding housekeeping (fire prevention) and build-up of combustible material, hazard spotting and reporting and general cleanness of work area.</p>	

11.14. Monitoring the implementation of verification procedures to ensure the presence on board the means of transport of the documents and safety equipment which must accompany transport and the compliance of such documents and equipment with the regulations.	X
<p>Comments: A check of a multimodal transport document was inspected during the audit, the transport document did not include all information on the consignment and there seemed to be a lithium battery missing from the transport document.</p> <p>A check list to be completed prior to loading/unloading of dangerous goods to ascertain all drivers are carrying proof of training (ADR Training Certificate) when required and are in possession of a Dangerous Goods Note (Transport Document) for the load if required by ADR/IMDG Code.</p> <p>For the ADR drivers to be issued with the Instructions in Writing (liW) when exceeding the ADR threshold limit is the responsibility of GXO Logistics. The liW are to be in the vehicle crew's own language that they can understand and are to conform to ADR 2017, different languages can be downloaded from the following link below:</p> <p><a href="https://unece.org/linguistic-versions-adr-instructions-writing">https://unece.org/linguistic-versions-adr-instructions-writing</a></p>	
11.15. Monitoring the implementation of verification procedures to ensure compliance with the requirements governing loading and unloading.	X
<p>Comments:</p> <p>ADR states that a check must be carried out on the driver and vehicle to ensure all documents and equipment is correct. A check list completed by loaders/unloaders and confirmation that no packages are damaged or leaking prior to loading/unloading would be a way of satisfying this requirement. No vehicle is to be loaded without checking training certificate (Full ADR or Awareness trained) especially contractors' vehicles.</p> <p>Check list in annex C</p>	
11.16. Monitoring the existence of the security plan indicated in 1.10.3.2.	x
Comments: Toyota material Handling Group UK do not currently transport dangerous goods that meet the requirements of High Consequence Dangerous Goods (HCDG) and do not have a road security plan, see section 10.1.	

## 12. OTHER OBSERVATIONS.

Toyota Material Handling Group UK rely on multi modal transport documents (Dangerous Goods Notes) generated from templates supplied by third parties or have relied on the dangerous goods notes to be produced by the carrier, the transport document must be supplied by the consignor to indicate that the dangerous goods are "classified, packed, placard and in all respects in a proper condition for transport". These documents must be produced by a suitably qualified person who has attended function specific training and holds a in date training certificate.

### 13. PROGRAMME OF WORK FOR FOLLOWING YEAR.

The following work will require to be completed:

#### Urgent

- The availability of the current surface regulations and their updating as required.
  - ADR 2023 from July 2023
  - IMDG Dangerous Goods Code 41-22 for sea/ferry transport
- Transport documents for shipments of lithium batteries to include all articles in the consignment.

#### Non urgent

- The correct marking of a black diamond on its point of a minimum size of 100mm x 100mm on packages containing Limited Quantity packages (may be reduced in size).
- Correct procedures to contain and apply the correct closures to a package with a returned faulty/defective battery with non-critical fault by the service technicians.
- DGSA reports available on request to the UK enforcement agencies as per the requirements of ADR Part 1 Chapter 1.8.3.3 and keeping of these report for 5 years.

#### Routine

- The correct use of UN packaging and the correct marking, labelling and production of surface transport documents and the closing of the packaging as per the package manufactures guidance and packing defective batteries in inners before packing into the outer packaging.
- The keeping of transport documents (Dangerous Goods Notes) for 3 months as a minimum after the completion of the road or sea journey.

### 14. SUMMARY AND RECOMANDATIONS.

Toyota Material Handling Group UK are a large size organisation supplying, renting, and carrying out the maintenance on a large range of material handling equipment and controlling the warehousing facility of spares and various battery packs. They are involved in the loading of MHE and employ the services of GXO logistics to transport the equipment around the UK.

There is a lack of annual reports held by the undertaking and these annual reports must be held for five years and not destroyed before. I have given my recommendations in section 13 and given them a priority of urgent, non-urgent and routine.

Toyota Material Handling Group UK are reminded that their safety obligations according to ADR can be found in ADR, Part 1 Chapter 1.4.2.1 for the Consignor and 1.4.2.2 for the Carrier.


Consignors' safety obligations ADR 1.4.2.1

- Ascertain the goods are classified and authorised for transport.
- Furnish the carrier with information in a traceable form and if necessary the transport documents.
- Only use packaging's, large packaging's approved and suited for the carriage of the articles concerned and bearing the marks prescribed in the ADR regulations
- Comply with the requirements on the means of dispatch and on forwarding restrictions.

Carriers safety obligations ADR 1.4.2.2

- Check that the goods in carriage are permitted to be carried under ADR
- Check that the information needed has been provided and is on board the transport unit(s) provided by GXO Logistics.
- Ascertain visually that vehicles and loads have no obvious cracks, defects leakages, missing equipment, or other faults.
- Check vehicles are not overloaded.
- Check placards and markings are correct for road or sea transport.
- check the equipment required (as listed on Instructions in Writing (IiW) within ADR) is present.
- Stop the journey if a safety infringement is found and correct it before continuance of carriage.

Andrew J Shylan DGSA

Signature. 	Date. 13/03/24
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## Functions of Safety Advisers

1. Monitoring compliance with the rules governing the transport of dangerous goods
2. Advising his undertaking on the transport of dangerous goods
3. Preparing an annual report to the management of their undertaking, on the undertaking's activities in the carriage of dangerous goods. Such annual reports shall be preserved for five years and made available to the national authorities at their request

The advisor's duties also include monitoring the following practices and procedures relating to the relevant activities of the undertaking.

- The procedures for compliance with identification of dangerous goods to be transported.
- The practice in taking into account, when purchasing means of transport, any special requirements in connection with the dangerous goods to be transported.
- The procedures for checking the equipment used in connection with the carriage, packing, filling, loading or unloading of dangerous goods.
- Proper training of the employer's employees and the maintenance of records including the changes to the regulations.
- The implementation of proper emergency procedures in the event of any accident or incident that may affect safety.
- The investigation of and, where appropriate, preparation of reports on serious accidents, incidents or serious infringements
- The implementation of appropriate measures to avoid the recurrence of accidents, incidents or serious infringements
- The account taken of the legal prescriptions and special requirements in the choice and use of sub-contractors or third parties
- Verification that employees involved in the transport of dangerous goods have detailed operational procedures and instructions
- The introduction of measures to increase awareness of the risks inherent in the transport of dangerous goods
- The implementation of verification procedures to ensure the presence of the documents and safety equipment which must accompany transport and the compliance of such documents and equipment with health and safety regulations, and
- The implementation of verification procedures to ensure compliance with legislation governing loading and unloading of dangerous goods.
- The existence of a security plan indicated in 1.10.3.2



## Loading Area Guidelines

### ESTABLISH A LOADING/ UNLOADING AREA:

- Area should be level to help maintain stability of the truck and trailer. The ground should be free of potholes and debris.
- Area should be free of overhead electric lines.
- Area should be clear of other traffic – vehicles or foot. Pedestrians, the truck driver, or other employees not involved in the loading/ unloading process should be clear of the area.
- Area should have sufficient lighting for early morning or evening loading or unloading.
- If possible, the designated area should be a one-way route to prevent the need for vehicles to back up. If a driver is required to back the vehicle, a spotter should be used to protect pedestrians and property.

### GUIDELINES FOR TRUCK DRIVERS:

- When unloading, the driver should proceed to the designated area and remove tarps, straps or other load securement devices. Secure this material so it is not an obstruction to the forklift operator during the unloading process.
- The driver should secure vehicle, apply brakes and turn off engine, as appropriate, to prevent unsafe movement during the loading/ unloading operation.
- The driver should proceed to a designated area (safe zone) located away from the truck and outside of the loading/unloading area. The driver should remain in that area during the operation.
- NO material should be loaded/unloaded, nor should any forklifts be operating in the area around the truck until the driver has completed all of the tasks above and moved to the designated safe zone.

### GUIDELINES FOR FORKLIFT OPERATORS

- Operating a forklift should be limited to individuals who are trained and qualified to do so, including general forklift safety topics and equipment specific training. Initial training should be completed prior to authorization of the driver to operate the forklift. Refresher training should be completed every three years and following any forklift-related accident, property damage or near-miss incident.
- Have a clear understanding of the material being loaded/unloaded. Unloading a bunk of 2x4 is different from unloading laminated beams or a pallet of roof shingles.
- Check the load – Make sure that the load has not shifted, banding is still in place, and the overall load is in good condition and not likely to move or fall during the unloading process.
- No one, including other workers, should be on the opposite side of a truck from a forklift while it is moving material.
- EMPOWER your forklift driver to stop the loading/ unloading process if the location of the truck driver cannot be confirmed or someone else enters the loading/unloading zone. While loading/unloading of material is an everyday activity at most operations, safety cannot be taken for granted. It is management's responsibility to ensure that proper training and safe loading/ unloading procedures are in place and enforced.


































## Annex C

### LOADING/UNLOADING CHECKLIST

<b>GENERAL</b>	YES	N/A	NO
1. Is the truck/trailer correctly positioned and level?			
2. Are wheel chocks in place?			
3. Is there any damage to the truck or trailer?			
4. Are the appropriate people and equipment available for loading/unloading?			
5. Does the product require special lifts or a crane to handle the load?			
6. Are load straps in good condition (not frayed, worn or torn)?			
<b>DANGEROUS GOODS</b>	YES	N/A	NO
1. Driver has proof of dangerous goods training ADR Cert or Awareness training			
2. Vehicle fitted with 2 kg Fire extinguisher (Dry powder) which is serviceable			
3. Driver carrying photo ID			
4. Transport document given to driver			
5. Vehicle displaying orange plates x 2 (Exceeding 1000 haz unit threshold limit)			
6. Vehicle carrying full ADR safety equipment (Exceeding 1000 Haz limit)			
7. Additional fire extinguishers carried (8 kg or 12 kg total exceeding 1000 haz units)			
8. All vehicle crew have PPE (torch, gloves, goggles, High Vis Vest (Exceeding 1000 units)			
9. Driver's instructions in writing (exceeding 1000 haz units)			
<b>LOADING</b>	YES	N/A	NO
1. Has the driver been moved to the company safe zone?			
2. Are all helpers in sight of the forklift/crane operator?			
3. Are the load restraints suitable to secure the load?			
4. Does the total weight of the cargo exceed the truck's carrying capacity?			
5. Is the load well packed in the appropriate packaging?			
6. Any packages damaged or leaking			
7. Is documentation completed for all cargo being dispatched?			
8. Has the driver double-checked all restraints for specific load requirements?			
<b>UNLOADING</b>	YES	N/A	NO
1. Has any freight moved while in transit?			
2. Are all items effectively secured to a pallet, cradle or flatbed trailer?			
3. any packages damaged or leaking			
4. Are top-loaded items stable?			
5. Could any freight move or become unstable when the load restraints are removed?			
6. Has the driver been moved to the company safe zone?			
7. Are all helpers in sight of the forklift/crane operator?			

After reviewing this checklist, you should add any other items unique to your facility. This is just a sample of a checklist and how to organize it to make sure you are thorough in safeguarding your business against loading/unloading hazards.

# ANNEX D

CLASS		1		2		3		4		5		6		8	
Chemical Segregation By Chemical Group.		 		 	 	 	 	 	 	 	 	 	 	 	 
Explosive	1.0 Explosive		Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From
Compressed gases	2.1 Flammable	Segregate From	Keep Apart	Keep Apart	Segregate from or Keep Apart	Segregate From	Segregate From	Segregate From	Segregate From	Segregate From	ISOLATE	Keep Apart	Keep Apart	Keep Apart	Keep Apart
	2.2 Non Toxic	Segregate From	Keep Apart	Keep Apart	Keep Apart	Segregate From	Segregate From	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary
	2.3 Toxic	Segregate From	Segregate or Keep Apart	Keep Apart	Segregate From	Segregate From	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary
Flammable liquids	 	Segregate From	Segregate From	Keep Apart	Segregate From		Keep Apart	Segregate From	Segregate From	Segregation may not be necessary	ISOLATE	Keep Apart	Keep Apart	Keep Apart	Keep Apart
Flammable solids	4.1 Readily combustible	Segregate From	Segregate From	Segregation may not be necessary	Keep Apart	Keep Apart	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Keep Apart	Keep Apart	Segregation may not be necessary	Segregation may not be necessary
	4.2 Spontaneously combustible	Segregate From	Segregate From	Segregate From	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	ISOLATE	Keep Apart	Keep Apart	Keep Apart	Keep Apart
	4.3 Dangerous when wet	Segregate From	Segregate From	Segregation may not be necessary	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary
Oxidising substances	5.1 Oxidising	Segregate From	Segregate From	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Keep Apart	Keep Apart	Keep Apart	Keep Apart
	5.2 Organic peroxide	Segregate From	ISOLATE	Segregate From	Segregate From	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Keep Apart	Keep Apart	Keep Apart	Keep Apart
Toxic	   	Segregate From	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Keep Apart	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Keep Apart	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary
Corrosive	  	Segregate From	Keep Apart	Keep Apart	Keep Apart	Keep Apart	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Keep Apart	Keep Apart	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary	Segregation may not be necessary

## Annex E

Current Toyota dangerous goods articles by UN number and proper shipping names (PSN) and ADR/IMDG requirements.

### Diesel Powered Forklift

UN Number UN 3166

PSN VEHICLE, FLAMMABLE LIQUID POWERED

Class 9



#### ADR requirements

When carried as a load they are not subject to ADR if they meet the following requirements:

Any fuel valve between engine and fuel tank is in the closed during carriage

Vehicle loaded upright and secured against falling

The above provisions do not apply to any vehicle where the vehicle fuel tank is drained, and the vehicle cannot operate through lack of fuel.

(Not subject to the IMDG Code if meeting any of Special Provision 961 requirements)

### LPG Powered Forklift

UN Number UN 3166

PSN VEHICLE, FLAMMABLE GAS POWERED Class 9



#### ADR requirements

When carried as a load they are not subject to ADR if they meet the following requirements:

Any fuel valve between engine and gas tank is in the closed during carriage

Vehicle loaded upright and secured against falling

The above provisions do not apply to any vehicle where the vehicle gas tank is empty of liquified gas, the tank is below 2 bar pressure and isolation valve on the tank is closed and secured.

(Not subject to the IMDG Code if meeting any of Special Provision 961 requirements)

### Lead Acid Battery Powered Forklift & Lithium battery powered Forklift

UN Number UN 3171

PSN BATTERY POWERED VEHICLE

Class 9



#### ADR requirements

When carried as a load they are not subject to ADR if they meet the following requirements:

Electrical contact is open, and equipment cannot operate (battery disconnected)

Vehicle loaded upright and secured against falling

Lithium batteries in a damaged or defective vehicles where the damage or defect has no significant impact on the safety of the cell or battery, may be installed in the vehicle.

(Not subject to the IMDG Code if meeting any of Special Provision 961 requirements)



## **Lead Acid Battery Powered Pallet Truck & Lithium battery powered Pallet Truck**

UN Number UN 3171

PSN BATTERY POWERED VEHICLE

Class 9



### **ADR requirements**

When carried as a load they are not subject to ADR if they meet the following requirements:

Electrical contact is open, and equipment cannot operate (battery disconnected)

Vehicle loaded upright and secured against falling

Lithium batteries in a damaged or defective vehicles where the damage or defect has no significant impact on the safety of the cell or battery, may be installed in the vehicle.

(Not subject to the IMDG Code if meeting any of Special Provision 961 requirements)

## **Lead acid battery pack**

UN Number UN 2794

PSN BATTERIES, WET FILLED WITH ACID

Class 8



Batteries, wet filled with acid are not subject to the requirements of ADR when:

If New storage batteries:

- They are secured in such a way they cannot slip, fall or be damaged.
- They are provided with a carrying device.
- They are suitably stacked on pallets if not provided with a carrying device.
- There are no dangerous traces of acids or alkalis on the outside.
- They are protected against short circuit.

Used storage batteries

- Their cases are undamaged.
- They are secured in such a way they cannot slip, fall or be damaged.
- There are no dangerous traces of acids or alkalis on the outside of the article.
- They are protected against short circuit.

“Used storage Batteries” means storage batteries carried for recycling at the end of their useful life.

(Subject to the IMDG Code Sea regulations)

**Lithium-Ion Batteries exceeding 12 kg gross mass employing strong impact resistant outer casing or assemblies of such batteries.**

UN Number UN 3480

PSN LITHIUM ION BATTERIES

Class 9



Outer protective case must be marked with UN 3480 and class 9 lithium battery label.  
For IMDG carriage "Lithium-Ion Batteries" must be added to case next to UN 3480



Lithium-ion batteries when installed in a vehicle capable of transporting a person or a load must be identified as UN 3171 BATTERY-POWERED VEHICLE.

Lithium-ion batteries exceeding 12 kg are subject to ADR and packed as per ADR packing instruction P903 (2) or LP903.

Batteries must be packed in

- Strong outer packaging's
- Protective enclosures (e.g., fully enclosed, or wooden slatted crates)
- pallets or other handling devices

Cells and batteries shall be secured to prevent movement, and the terminals shall not support the weight of other superimposed elements.

Packages do not require to be UN approved or certified.

(Subject to the IMDG Code Sea regulations)

**Lithium-Ion Batteries not exceeding 12 kg gross mass.**

UN Number UN 3480

PSN LITHIUM ION BATTERIES

Class 9



Batteries exceeding 100 Watt hour

Cells exceeding 20 Watt hour

If the battery is installed in the equipment, see UN 3171 Battery Powered Vehicle.

If the battery is packed with the equipment then UN 3481 Lithium ion battery packed with equipment must be used to describe article.

If the battery is not contained or installed in the equipment it subject to the ADR regulations and must be packed as ADR packing instruction P903 (1) and marked and labelled as per ADR or IMDG codes with UN 3480 PSN Lithium ion Batteries and class 9, lithium battery label





**Damaged or defective Lithium-ion batteries** must be packed as per ADR packing instruction P908



ADR Packing instruction P908 requires the batteries to be packed in a UN certified package.

to be marked with UN 3480 Damaged/Defective Lithium ion batteries and class 9 lithium battery label

Packing the battery as per ADR P908 (UN certified outer packaging, PG II performance standard)

- The battery or cell must be individually packed into an inner packaging, the inner packaging must be leakproof to prevent potential release of electrolyte, I strongly recommend an antistatic plastic bag and place the battery within the bag and seal it before placing into outer packaging.
- The inner packaging shall be surrounded by sufficient non-combustible and electrically non-conductive thermal insulation to protect against a dangerous evolution of heat, Toyota Material Handling Group are currently using “Vermiculite” correctly for this very purpose.
- Any battery exceeding 30 kg shall be limited to one cell or battery per outer packaging.

When Lithium-ion batteries are carried for disposal or for recycling the package must be marked with UN3480 “LITHIUM BATTERIES FOR DISPOSAL” or “LITHIUM BATTERIES FOR RECYCLING” and packed as per ADR packing instruction P909.

(Also subject to the IMDG Codes)

### **Critical Lithium Ion Batteries ADR Packing Instruction P911 or LP906**

Lithium Ion-Batteries that are liable to rapidly disassemble, dangerously react, produce a flame or a dangerous evolution of flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive, or flammable gasses.

UN approved packages tested to packing group I performance level, the package must also meet the following standards:

- Outside surface temperature must not exceed 100°C
- No flame shall occur outside the package
- No projectiles shall exit the package
- The structural integrity of the package shall be maintained
- The packages shall have a gas management system to filter out toxic/flammable gases.

Currently TMHG UK are using the 4A/X141/S/20/D/BAM15468-LogBatt metal packages to comply with the current requirements. These packages are supplied with fire

(Also subject to the IMDG Code)



## Annex F

### Packaging Approval Certificates

#### Certificates held:

- |   |                             |
|---|-----------------------------|
| 1. 4G/X53/S/**/N/NET3278C-ID<br>4GV/X30/S/**/N/NET3275C | Cert valid till 30/04/26    |
| 2. 4G/Y7.5/S/**/N/NET3295C                              | Cert valid till 31/12/24    |
| 3. 4A/X141/S/20/D/BAM/15468-logBATT                     | Cert Valid till (not known) |
| 4. 1H2/X88/S/D/BAM8631-M8                               | Cert valid till (not known) |

#### Certificates not held for the following

5. 4G/Y11/S/\*\*/CN/C231710 PI:005

No information can be found on the above packaging, the package is produced in China and makes identification of package producer and approval certificate impossible to acquire.