

Potash Packaging Standard for Delivered Goods and Equipment

40700-WL-STD-63593

Revision 2

15-Apr-2024

Description

This document outlines the minimum requirements with regards to the preservation, packaging, marking, transportation, and onsite storage of goods being supplied to the BHP Potash operation. The purpose of this document is to ensure that the integrity of the materials and equipment procured is maintained until the goods are install.

Document Approval

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Revision History

Rev	Date	Description	Status
A	03-May-2023	Initial Release.	Issued for Review.
B	03-May-2023	Revised to address comments.	Issued for Review.
0	30-May-2023	Revised to address comments.	Approved for Use.
1	20-Sept-2023	Revised to address comments.	Approved for Use.
2	15-Apr-2024	Revised to address comments.	Approved for Use.

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Potash Packaging and for Delivered Goods and Equipment

1. Purpose

This document includes the minimum requirements for Supplier packaging and marking for materials and equipment procured and shipped to BHP's Potash operation.

1.1 Objectives

The objective of this document is:

- Provide the minimum requirements and practical guidance to ensure all materials and equipment being supplied to the Potash operations are preserved and packaged by the Supplier in a way that prevents damage during transport and storage.
- Ensure that materials and equipment are packaged and labelled in accordance with Potash's Supply requirements to ensure accurate and timely receipt of the goods. Ensure that dangerous, oversize, or fragile goods are packaged and labelled correctly so they can be transported in accordance with the requirements of the relevant laws and regulations.

1.2 Required Outcomes

This Standard will provide the following outcomes:

- To meet the minimum requirements set out in this document to preserve and package materials and equipment in a way that will ensure that the cargo will reach the destination in a condition that is fit for installation as well as enable the transport company to comply with the relevant transportation regulations.
- To advise the Potash operation if Supplier's are unable, or it is not practical, to comply with the minimum requirements or guidance provided in this document or any referenced document.

1.3 Risk Management

This Standard is designed to ensure the risks in Table 1-1 are effectively managed.

Table 1-1: Risks.

Risk	Definition	Management procedure
Dangerous Goods (DG)	DG Approval Site	Review CHEMALERT for any DG identified in the manifest/FHA inspection prior to unloading/loading and ensure they are approved for delivery to BHP.

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Risk	Definition	Management procedure
	DG Handling & Storage	Review relevant SDS to ensure DG Storage Segregation Guideline (see Appendix A) requirements are followed.
	DG Transport and Labelling	All dangerous goods to be clearly labelled, no decanting is to take place in the warehouse and DG transport Load Compatibility Guideline (see Appendix B) requirements followed.

2. Scope

This standard sets out the mandatory requirements for Warehousing and Logistics (W&L) Operational Readiness.

The standard document includes the minimum requirements for preservation, packaging, marking, onsite storage and equipment procured and managed by BHP for the Potash operations. All phases on the preservation, packaging, marking and transportation of materials and equipment will be subject to BHP's inspection. BHP reserves the right to reject the packaging when it does not conform to these instructions or when the packaging does not ensure sufficient protection of the material or equipment.

2.1 Inclusions

This Standard includes all deliveries for Potash operations.

2.2 Exclusions

This Standard excludes Employee personal packages.

3. Requirements

In a standard for packaging and transport, the requirements look like this:

3.1 General Packaging Requirements

The following packaging requirements, shall be met for all materials and equipment supplied to the Potash operation:

- The minimum packing requirements must meet the standards of the transport authorities of the country of origin of the material and equipment, the transport authorities in Canada and comply with the latest ISO standards.
- If the Supplier uses a preservation and packaging standard that exceeds these requirements, the Supplier's standard can be used after consultation with the Jansen operation.

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- If, due to the specific nature of certain material or equipment, certain requirements of this specification are not practical, the best alternative export packing industry methods will be used to obtain the desired comparable degree of protection. Any/all alternative export packing supplies and/or methods employed by the Supplier must be approved by BHP before the packaging of the goods.
- Packing materials must be selected and constructed to withstand the rigors of multiple handling by both manual and mechanical means such as truck, air, rail and/or ocean transport. Unless stated otherwise in the purchase order, the packaging and contents must withstand open, uncovered storage at the destination for up to 12 months in severe climatic conditions, including moisture, humidity, snow, extreme temperature ranges (from minus 50°C to plus 30°C), condensation, and dust. Special consideration must be given to the degree of protection and to the selection of packing materials to ensure:
 - o Safe and easy handling is facilitated.
 - o Economical in cost.
 - o Damage and theft are prevented.
 - o Rust and corrosion are inhibited.
 - o Liquids (e.g., oils etc.) and preservation coatings can withstand the above conditions.
 - o Intrusion of dust and moisture is prevented.
- All package design and construction will be developed to withstand the following (as applicable) and be marked with the applicable storage code and all relevant handling and cautionary marks:
 - o Multiple handling at loading ports, ports of discharge, laydown, consolidation,
 - o Multiple handling by forklift truck, crane truck, mobile crane, ship's crane and similar
 - o Cargo handling equipment commonly used in ports, airports and terminals
 - o Significant variations in ambient temperature, humidity, and pressure during transport
 - o Vibration, pitching, rolling, heaving and yawing and related acceleration forces in transit
 - o Storage for an extended period of time in an open lay down areas
- Where possible equipment shall be transported fully assembled. Where this is not possible all components removed shall be suitably match marked, preserved, packaged, and labelled so that the machine can be re-assembled easily at its destination.
- It is the responsibility of the Supplier to establish the quarantine requirements pertaining to importation of timber cases/crates at the destination, and to ensure that they are known and implemented before packing has commenced. The Supplier must ensure that all timber used for packaging is free of bark and any visible signs of inspector fungal attack, are free of toxic substances, and is certified (to international standards) to have been treated for the elimination of insects and disease (e.g. fumigated). Wood packing material must comply with IPPC standards and contain the ISPM15 marks. All wood packaging material must be debarked, treated, and marked in accordance with ISPM15.

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- Contents shall be a snug fit inside the case, shall be restrained from movement by being properly bolted to the base, braced by padded battens fixed firmly to the case, and where required be protected by suitable padding such as air bags, foam, felt, rubber, bubble wrap or fiber pads. All cases/crates shall have banding or strapping applied to assist the integrity of the crate during transit. Hay, straw or similar vegetable fibers, shredded newsprint, polystyrene chips or like material shall not be used as padding.
- Transportation saddles constructed for equipment shall be designed to provide support for the item until its final placement and installation. Therefore, it is necessary for these saddles to be designed and constructed of sufficient strength and attached securely to the equipment item to withstand the stresses to be encountered during shipment from the Supplier to the Potash operation. Such saddles must be of sufficient width and thickness to avoid “tripping” (e.g., toppling along the longitudinal axis of the supported equipment) in the event of shunting of rail wagons, emergency braking of the transport vehicle or pitching of a ship. If cylindrical, saddles must extend to at least one third of the diametric height of the equipment.
- All equipment pieces must be skidded; pre slung, or fitted with lifting lugs, or with other adequate means of lifting, and must be accurately and clearly marked with the center of gravity, and/or lifting points to ensure safe handling during loading, offloading, securing and other transport operations.
- Lifting attachments on equipment, packaging or containers shall be in a position that will not cause damage to the item or its packaging during the lift, or suitable protection must be supplied that does not contravene good rigging practices.
- Any rigging, lifting, or handling equipment being supplied with the item must meet all the required standards and come complete with all required certifications.
- The Supplier shall provide a detailed lift plan to the BHP purchasing officer when supplying any item that is unbalanced, considered an unusual load that requires a special lifting frame or spreader beam, or other special circumstance that would not be considered a standard lift.
- Each item must be provided with adequate lashing points to secure the load during handling and transport. Such lashing points should be clearly marked and must be situated at positions above the center of gravity and with capacity to withstand combined vertical, transverse, and longitudinal G forces.

3.2 General Preservation Requirements

The general preservation requirements outlined below, shall be met for all materials and equipment supplied to the Potash operation:

- Prior to preservation and packing, all project material and equipment must be checked internally and externally to ensure that it is free from all weld spatter, scale, rust, cuttings, filings, etc., as well as any other foreign matter. Critical wearing surfaces must be cleaned by dipping or brushing with a suitable solvent, such as petroleum, naphtha, or alkaline cleaning compound. After hydro testing, operation, or performance testing, all fluids (e.g. lubricating oil, fuels, or water) must be completely drained from all tanks, vessels, jacketing, piping, etc., and wiped or blown dry. Lint free rags must be used for wiping the critical wear surfaces.
- Items with machined surfaces must be suitably packed to afford adequate protection to such surfaces, including the application of the necessary preservation material such as Tectyl, taping, etc.

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according to best industry practice. Large machined surfaces, especially on unpacked items, must be covered by plywood or timber and bolted to the piece. Warning signs must be prominently displayed on or near machined surfaces to ensure that lifting slings and handling equipment are not rigged / used in these areas.

- All non-machined surface areas of unpacked items that may encounter the slings during lifting or handling, must be covered with timber boards, rubber or similar cushioning materials that will prevent scratches, dents, and other handling damage.
- Bagged desiccants must be placed inside material and equipment openings before applying protective covers to connections and openings of any equipment item susceptible to damage from moisture and identified with warning tags for removal before installation. Refer to Section 3.4, Special Markings, for requirements when desiccants are used.
- Un-flanged pipes or openings shall have the beveled ends protected using heavy duty plastic caps for openings up to 24" and steel or rubber bevel protectors for openings above 24".
- Threads for connections to services should be protected with suitable caps or plugs.
- Flange faces must be protected from physical and corrosion damage. Flanged openings must be protected with plywood (minimum 5.5mm thick) or metal blank flange covers bolted with at least three bolts to the flanged opening. The use of wire to attach the cover is not acceptable. An appropriate gasket must be used between the metal cover and the flange. If plywood covers are utilized, the joints must be sealed with a waterproof adhesive tape, after the openings have been covered.
- All machinery doors shall be locked and the keys separately labelled and securely taped to the door handles.
- Locking elements, hydraulic shrink discs, and similar devices need to be tightened to specifications prior to transport (or the elements they hold removed from shafts and shipped separately).
- Items susceptible to corrosion damage shall be coated with a suitable corrosion inhibitor such as VCI, Enviropeel, Shell Ensis, CRC Soft Seal, Balm Blue Parts Coater, or similar protectant and be packaged with desiccant materials to protect the goods against humidity.
- All electrical, electronic, and other goods where corrosion prevention cannot be applied shall be enclosed in airtight sealed barrier material of suitable quality in which sufficient quantity and type of desiccant is distributed.
- The mating surface of equipment components and shim shall be uniformly coated with a suitable corrosion inhibitor before assembly.
- The shafts of rotating machines shall be securely braced to prevent rotation and to minimize the shock loading effects and vibration to bearings during transport. Bearings particularly susceptible to brinelling shall be relieved of load during transport using false bearings to support the load, and where possible the machine will also have vibration isolators fitted. The Supplier shall provide the Company with instructions for the correct removal of bracing and / or false bearings.
- Instruments or devices installed on equipment that are particularly sensitive to mechanical stresses during transport shall be either protected by suitable padding or removed and transported separately.
- Where preservatives have been added to oil, or a cavity filled with VPI, signage shall clearly state that flushing and refilling is required prior to use. Greases and oils containing silicones or antifoam

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agents shall not be used to preserve machinery.

- Equipment or components that have surfaces that can collect and hold water must be covered or packed to prevent the water collecting.
- Equipment that will require regular in storage preservation maintenance shall have the preservation and packaging designed in such a way that maintenance can be performed without compromising the integrity of preservation or packaging.
- Goods susceptible to damage due to vibration during transport, which is not possible or practical to prevent by fitting locking devices or vibration isolators, shall have signage fitted that informs the transport company to transport using trucks with air or hydraulic cushioned decks.

3.3 General Marking Requirements

Each package shall be marked with the following information:

- Destination including specific site (i.e. BHP Jansen Potash Mine, Port)
- Purchase order number
- Work order number or project number
- 1SAP Material Number or free text on purchase order
- Serial numbers (as applicable)
- Suppliers name and contact details
- Gross and net weight (kg)
- Measurements - length, width, height (m)
- Package number of total consignment
- Date packed
- Address of origin
- Other standard markings as specified by the purchase order such as project specific ID tags

All markings shall be applied using a waterproof medium on two sides and on one end of each package in clear characters at least 50mm high or largest feasible characters for the smaller packages. On bundles the markings are to be on labels securely strapped on with stainless steel wire.

3.4 Special Marking Requirements

In addition to the general marking requirements, special markings may also be applicable to the materials and equipment being transported. The list outlined below as well as Table 8-1 shall be reviewed, and the applicable labels included on the packaging:

- Lifting attachments designed and intended to lift off packaging only which are not intended to lift the actual item contained inside the packaging shall be clearly marked: "designed for lifting packaging only".
- Unbalanced packages shall have a center of mass indicated by a painted symbol.
- All equipment to be shipped with enclosed dehydrating materials must be conspicuously marked with a large red warning tag reading:

"CAUTION: Desiccant materials are enclosed in this equipment. Do not operate before removing."

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Should the integrity of the enclosure be broken before operation, the desiccant must be replaced, and the enclosure resealed for continued storage".

- For hazardous/dangerous or restricted goods, mark as specified by the relevant dangerous goods regulations. Refer to Section 11 for further details.

Table 8-1: Special Marking Symbols

Designation	Symbol	Explanation
Fragile, handle with care		The symbol should be applied to easily broken cargoes. Cargoes marked with this symbol should be handled carefully and should never be tipped over or slung
Use no hooks		Any other kind of point load should also be avoided with cargoes marked with this symbol. The symbol does not automatically prohibit the use of the plate hooks used for handling bagged cargo.
Top		The package must always be transported, handled, and stored in such a way that the arrows always point upwards. Rolling, swinging, severe tipping or tumbling or other such handling must be avoided. The cargo need not, however, be stored "on top".
Keep away from heat (solar radiation)		Compliance with the symbol is best achieved if the cargo is kept under the coolest possible conditions. In any event, it must be kept away from additional sources of heat. It may be appropriate to enquire whether prevailing or anticipated temperatures may be harmful. This label should also be used for goods, such as butter and chocolate, which anybody knows should not be exposed to heat, in order to prevent losses.
Protect from heat and radioactive sources		Stowage as for the preceding symbol. The cargo must additionally be protected from radioactivity.

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Designation	Symbol	Explanation
Sling here		The symbol indicates where the cargo should be slung, but not the method of lifting. If the symbols are applied equidistant from the middle or center of gravity, the package will hang level if the slings are of identical length. If this is not the case, the slinging equipment must be shortened on one side.
Keep dry		Cargoes bearing this symbol must be protected from excessive humidity and must accordingly be stored under cover. If particularly large or bulky packages cannot be stored in warehouses or sheds, they must be carefully covered with tarpaulins.
Center of gravity		This symbol is intended to provide a clear indication of the position of the center of gravity. To be meaningful, this symbol should only be used where the center of gravity is not central. The meaning is unambiguous if the symbol is applied onto two upright surfaces at right angles to each other.
No hand truck here		The absence of this symbol on packages amounts to permissions to use a hand truck on them.
Stacking indication		The maximum stacking loads must be stated as "...kg max." Since such marking is sensible only on packages with little loading capacity, cargo bearing this symbol should be stowed in the uppermost layer.
Clamp here		Stating that the package may be clamped at the indicated point is logically equivalent to a prohibition of clamping anywhere else.
Temperature limitations		According to regulations, the symbol should either be provided with the suffix "...°C" for a specific temperature or, in the case of a temperature range, with an upper ("...°C max" and lower ("...°C min) temperature limit. The corresponding temperatures or temperature limits should also be noted on the consignment note.

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Designation	Symbol	Explanation
Do not use forklift truck here		This symbol should only be applied to the sides where the forklift truck cannot be used. Absence of the symbol on other sides of the package amounts to permissions to use forklift trucks on these sides.
Electrostatic sensitive device		Contact with packages bearing this symbol should be avoided at low levels of relative humidity, especially if insulation footwear is being worn or the ground/floor is nonconductive. Low levels of relative humidity must be expected on hot, dry summer days and very cold winter days.
Do not destroy barrier		A barrier layer which is (virtually) impermeable to water vapor and contains desiccants for corrosion protection is located beneath the outer packaging. This protection will be ineffective if the barrier layer is damaged. Since the symbol has not yet been approved by the ISO, puncturing of the outer shell must be avoided for any packages bearing the words "Packed with desiccants".
Tear off here		This symbol is intended only for the receiver.

3.5 Packing List Requirements

Packing lists detailing all the items contained in each package shall be produced in triplicate:

- One copy shall be enclosed with the goods.
- One copy shall be attached to the exterior of each package in a waterproof envelope.
- One copy shall be supplied to the BHP W&L team electronically.

3.6 Requirements for the Supply of Oversize Goods

Typically loads considered to be oversize exceed the following dimensions or weight:

- Length: 11.8 meters
- Width: 2.30 meters
- Height: 2.30 meters (including transport vehicle)
- Shipping weight: >20 ton

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The Supplier shall provide the following information to the BHP W&L team three months in advance of the expected movement.

- Weight and dimensions of the equipment
- Centre of gravity
- Lifting lugs, lashing, and jacking locations
- Size of lugs
- Saddle material used (wood or steel)
- Saddle location
- Number of saddles
- Saddle width, height, and weight (per saddle)
- Any specific transport and lifting requirements and /or precautions
- Any drawing that shows dimensions, weights, or other information relevant to the lift of transportation

3.7 Requirements for the Supply of Hazardous Substances or Dangerous Goods

The Supplier shall provide all appropriate documentation for hazardous substances and dangerous goods including shipping certification, instructions for shipping and material safety data sheets (MSDS) which include handling instructions, material properties, exposure information, emergency medical information, and disposal requirements. Documentation shall be sufficiently specific for users to identify all necessary actions concerning the hazardous substance or dangerous goods being supplied.

The Supplier shall certify that all containers and packaging for hazardous substances or dangerous goods such as poisons, poisonous gas, inflammable liquids, compressed gases, inflammable compressed gases, explosives, and radioactive materials etc. are in accordance with all applicable laws and regulations which govern local and international shipments and all appropriate international hazardous material transportation marking, signage, and documentation.

Dangerous material and equipment by air must be packaged and labeled according to IATA regulations (47th or current edition) and must include a properly completed Shippers Declaration for Dangerous Goods. The Shipper's Declaration must identify the Consignee as the BHP Canada Inc., Jansen, SK, Canada as that is the ultimate destination.

Dangerous Material and equipment for Road Transport must be packaged and labeled according to current Clear Language Regulations for the Transportation of Dangerous Goods and must include a properly completed Clear Language Bill of Lading for Dangerous Goods.

Dangerous Material and equipment for Marine Transport must be packaged and labeled according to current Clear Language Regulations for the Transportation of Dangerous Goods, act and regulations and to the International Maritime Dangerous Goods code (IMDG). All Dangerous Material and equipment consigned to Canada must be accompanied by documentation detailing Proper Shipping Name, UN ID number, hazard class, and amount shipped, and must be received in a UN approved means of containment.

Hazardous and non-hazardous substances shall be identified on separate invoices and packing lists using the substances proper technical name. All hazardous substances invoices and packing lists shall contain the following statement: "This is to certify that the above-named material is properly classified, described, packaged, marked and labelled, and is in the proper condition for transportation according to the appropriate Government or International Transportation regulations".

4. Definitions

- (1) Acronyms and abbreviations used in this document are:

Table 4-1: Definitions.

Term	Abbreviation	Definition
Warehousing and Logistics	W&L	Warehousing and Logistics BHP

5. Governance and Change

- (1) This document is owned and managed by W&L Operations.
- (2) No changes or deviations from this standard will be permitted without approval from W&L Operations.

6. Roles and Responsibilities

The roles and responsibilities that apply to this procedure are shown below.

Table 6-1: Roles and responsibilities.

Role	Responsibility
Shipper	A person or company responsible for organising and transporting goods from one point to another.
Receiver	A person or company responsible for confirming receipt of items delivered from distribution centres to the warehouse.
Procurement	Include in Contract or Framework agreement with Contractors.

7. Related Documents

Refer to the following related documents in Table 7-1 for further details:

Table 7-1: Related Documents.

Document Name	Document Reference	Number	/
Jansen Preservation, Packaging and Transport Standard for Goods and Equipment	40001-OP-STD-40162		

APPENDIX A – Dangerous Goods Storage Segregation Chart

DANGEROUS GOODS STORAGE SEGREGATION CHART

CLASS or DIVISION												
		2.1	2.2	3	4.1	4.2	4.3	5.1	5.2	6	8	9
 COMPRESSED GASES 2.1 Flammable gas	2.1	OK to store together	Segregate at least 3m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Isolate	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together
 2.2 Non-flammable non-toxic gas	2.2	Segregate at least 3m. Check SDS.	OK to store together	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 5m. Check SDS.	May not be compatible. Check SDS.	May not be compatible. Check SDS.	Segregate at least 5m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together
 FLAMMABLE LIQUIDS (and Combustible Liquids)	3	Segregate at least 5m. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together	Segregate at least 3m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Isolate	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together
 FLAMMABLE SOLIDS 4.1 Flammable solid	4.1	Segregate at least 5m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together	Segregate at least 3m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	OK to store together
 4.2 Spontaneously combustible	4.2	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together	Segregate at least 3m. Check SDS.	Segregate at least 5m. Check SDS.	Isolate	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together
 4.3 Dangerous when wet	4.3	Segregate at least 5m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together	Segregate at least 3m. Check SDS.	Segregate at least 5m. Check SDS.	May not be compatible. Check SDS.	May not be compatible. Check SDS.	OK to store together
 OXIDISING SUBSTANCES 5.1 Oxidising substance	5.1	Segregate at least 5m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 5m. Check SDS.	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.
 5.2 Oxidising peroxide	5.2	Isolate	Segregate at least 5m. Check SDS.	Isolate	Segregate at least 5m. Check SDS.	Isolate	Segregate at least 5m. Check SDS.	Segregate at least 5m. Check SDS.	OK to store together	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.
 TOXIC SUBSTANCES	6	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	OK to store together	May not be compatible. Check SDS.	OK to store together
 CORROSIVE SUBSTANCES	8	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	Segregate at least 3m. Check SDS.	Segregate at least 3m. Check SDS.	May not be compatible. Check SDS.	May not be compatible. Check SDS.	OK to store together
 MISCELLANEOUS DGs	9	OK to store together	OK to store together	OK to store together	OK to store together	OK to store together	OK to store together	May not be compatible. Check SDS.	May not be compatible. Check SDS.	OK to store together	OK to store together	OK to store together

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APPENDIX B – Dangerous Goods Transport Load Compatibility Table

LOADING COMPATIBILITY TABLE

A GUIDE FOR THE SEGREGATION OF DANGEROUS GOODS IN VEHICLES AND FREIGHT CONTAINERS

CLASS	1	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6	7	8	9			SPECIAL NOTES
1		YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	SEE NOTE 1
2.1	NO	YES	YES	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES	YES	YES	YES	SEE NOTES 2 & 12
2.2	NO	YES	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	SEE NOTE 3
2.3	NO	YES	YES	YES	NO	YES	NO	YES	NO	NO	YES	YES	YES	YES	NO	YES	SEE NOTES 3 & 14
3	NO	YES	YES	NO	YES	YES	NO	YES	NO	NO	YES	NO	YES	YES	YES	YES	SEE NOTES 3 & 4
4.1	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	
4.2	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	YES	YES	YES	YES	
4.3	NO	NO	YES	YES	YES	YES	YES	YES	NO	NO	YES	NO	NO	YES	YES	YES	
5.1	NO	NO	YES	NO	NO	NO	NO	NO	YES	NO	YES	NO	NO	YES	YES	NO	SEE NOTES 8, 11 & 5
5.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	YES	YES	NO	SEE NOTES 5 & 8
6	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	SEE NOTES 4, 5, 6 & 14
7	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	YES	SEE NOTES 9 & 14
8	NO	YES	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	NO	YES	SEE NOTES 6, 10 & 14
9	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	SEE NOTE 7

Notes:

 means MAY BE LOADED into the same vehicle or freight container.

 means MAY NOT BE LOADED into the same vehicle or freight container.

 This International Maritime Dangerous Goods Code classifies some substances as environmentally hazardous. Other labeling, to see these risks, additionally, be marked with the Marine Pollutant label.

1. Explosives are incompatible with all other classes of dangerous goods, in all quantities, except as provided in the Australian Explosives Code and State, Territory or Commonwealth legislation. However, Dangerous goods of Class 1.4S are compatible with other dangerous goods providing the aggregate quantity of all dangerous goods in the transport unit does not exceed 1000 kg/ltres.

2. When one or both classes are in bulk or en masse. They are compatible only when both classes are in receptacles not exceeding 500 litres capacity.

3. If the gas of class 2.2 has a subsidiary risk of Class 5.1 and if either container exceeds 500 litres capacity.

4. When Class 3 substance is Nitromethane.

5. When Class 5 substance is a fire risk substance.

6. When Class 6 substance is a cyanide and Class 8 substance is an acid.

7. When Class 9 substance is a fire risk substance.

8. Fire Risk substances are any readily ignitable solid substances e.g. waste paper, hay, woodchips.

9. Radioactive substances must be separated from mail, undeveloped photographic film, personnel and livestock. They must be stowed in accordance with the ADO, the code of Practice for the Safe Transport of Radioactive Substances and State and Territory legislation.

10. When one substance is a concentrated strong acid and the other is a concentrated strong alkali.

11. When one substance is Calcium Hypochlorite (dry or hydrated) or its mixtures, and the other is Dichloroisocyanuric acid, Trichloroisocyanuric Acid or any Chloroisocyanurate or when one of the substance is Ammonium Nitrate and the other is Tetraazomethane, one of the above acids or any bromate, chlorate, chlorite, hypochlorite, chloroisocyanurate or inorganic nitrate.

12. Vehicles and containers carrying compressed Oxygen and/or Nitrous Oxide or other oxidizing gas may be marked with a single  label instead of class 2.2  label and Class 5.1  subsidiary label, for land transport in Australia. These gases may also be carried together on the same vehicle with flammable gases Class 2.1  in which case a Mixed Class vehicle placard  would be appropriate. That is, providing the capacity of both containers does not exceed 500 litres.

13. Mixed class labels  may be used to mark vehicles in which more than one class of compatible dangerous goods are being carried.

14. Food and food packaging are incompatible with these classes, in all quantities, except in the case of Class 8 substances intended for use in food manufacture. Note the prohibition for food packaging materials, even prior to delivery to the food manufacturer. The label P443  can be used to warn carriers of the nature of the packaging materials.

15. NOTE: this table is intended as a useful guide. However, specific reference should be made to the ADO Code with respect to the loading of particular combinations of goods. Improper use of the information contained in this Table or failure to obtain specific advice may result in adverse outcomes.

40700-WL-STD-63593, Rev 2 (15-Apr-2024)