



# Segregation and Packaging of Healthcare Waste

## Healthcare Waste

Healthcare waste is managed by segregating healthcare risk waste - which is potentially infectious and hazardous - from the bulk of waste which is domestic in nature.

**The Department of Health's definition of healthcare waste is 'the solid or liquid waste arising from healthcare activities'**

## Segregation

Segregation at the point of origin, aided by suitable and consistent packaging, is vital in enabling different forms of waste to be handled, transported and disposed of in a manner which is safe and in keeping with the nature of the waste.

**Always place the appropriate bags and bins close to where waste is generated**

## Packaging

There are two main types of packaging for healthcare risk waste - bags and rigid containers. Both types must confirm to United Nations (UN) minimum specifications for leak resistance, strength, and penetration / tear resistance.

*Detailed information on UN primary packaging specifications can be found on the Health & Safety Authority web page: [www.hsa.ie/eng/Your\\_Industry/ADR\\_-\\_Carriage\\_of\\_Dangerous\\_Goods\\_by\\_Road](http://www.hsa.ie/eng/Your_Industry/ADR_-_Carriage_of_Dangerous_Goods_by_Road)*

**The correct packaging of waste is the responsibility of the waste producer**



## Healthcare Risk Waste

### Infectious Waste

Includes blood, blood products and other potentially infectious materials, e.g. saliva; swabs, dressings, PPE contaminated with blood and OPIM; contaminated waste from patients with transmissible infectious diseases.

### Sharps

Includes any object which has been used in the diagnosis, treatment or prevention of disease that is likely to cause a puncture wound or cut to the skin.

### Pharmaceutical Waste

Includes controlled drugs, expired, partially used or patient returned medicines.

## Healthcare Non-Risk Waste

### Domestic Waste

Includes normal household & catering waste, all non-infectious waste, non-toxic, non-radioactive and non-chemical waste.

### Confidential Waste

Includes paper and equipment containing personal, sensitive or confidential data.

### Medical Equipment

Assessed as non-infectious, not contaminated with blood or hazardous body fluids, e.g. plastic bottles, packaging etc.

### Offensive Waste

Assessed as non-infectious, i.e. not contaminated with blood or hazardous body fluids e.g. clear tubing, non-contaminated gloves, aprons and masks.

#### Remember!

Offensive does not equal infectious.



# Healthcare Risk Waste

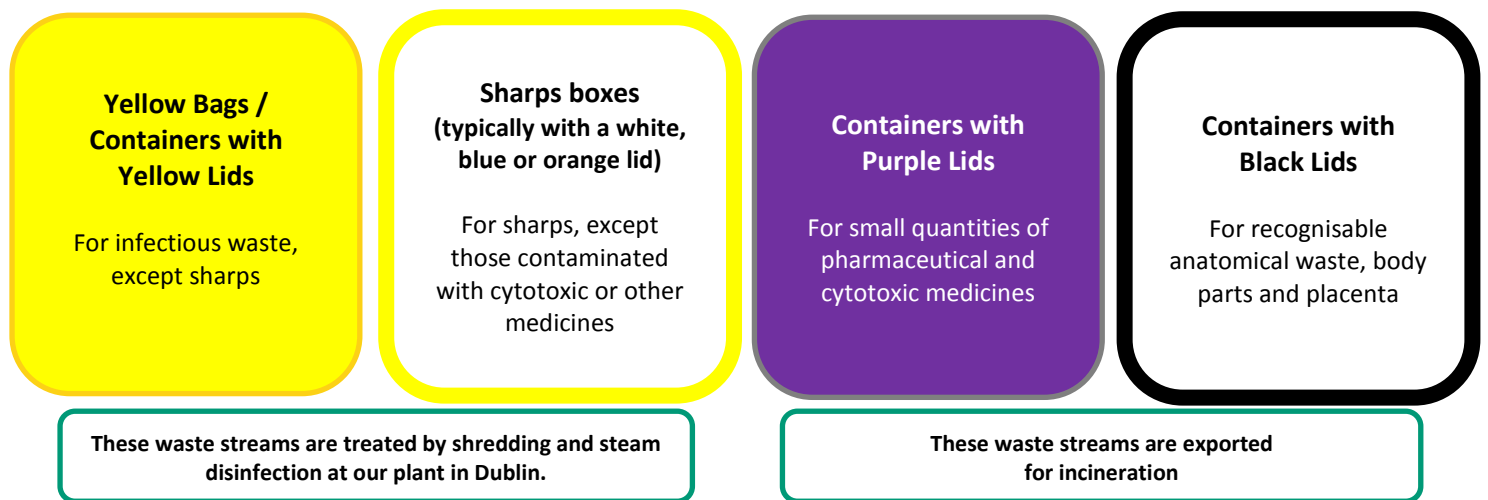
## Colour Coding for Correct Waste Segregation

Healthcare Risk Waste is disposed of through two separate routes:

- ➔ 95% through Alternative Treatment Plants in Dublin
- ➔ 5% through incineration / recovery abroad

A colour coding system is used to ensure correct segregation at waste producer level, leading to the waste being routed, and therefore disposed of, correctly and in accordance with the regulatory guidelines and obligations.

**The following colour coding system is used to help Stericycle customers stream their healthcare risk waste compliantly:**



### Quick Tips

- ➔ All personnel who handle waste have a responsibility for its correct disposal
- ➔ Most healthcare risk waste can be considered as solid waste for containment purposes
- ➔ Yellow healthcare risk waste bags must be sealed and secured by the swan-neck method
- ➔ Sharps containers should only be filled to the marked fill line on the container, NEVER overfilled (when in use, the temporary closing option should be engaged).
- ➔ All lids must be properly closed, by engaging the permanent closing mechanism, ensuring containers are spill-proof
- ➔ Where small quantities of liquid are present, an inner liner or absorbent material must be used to stabilise the liquid and prevent leakage
- ➔ Wastes whose composition is 30% or more liquid are prohibited from the heat disinfection plants and must be exported for incineration



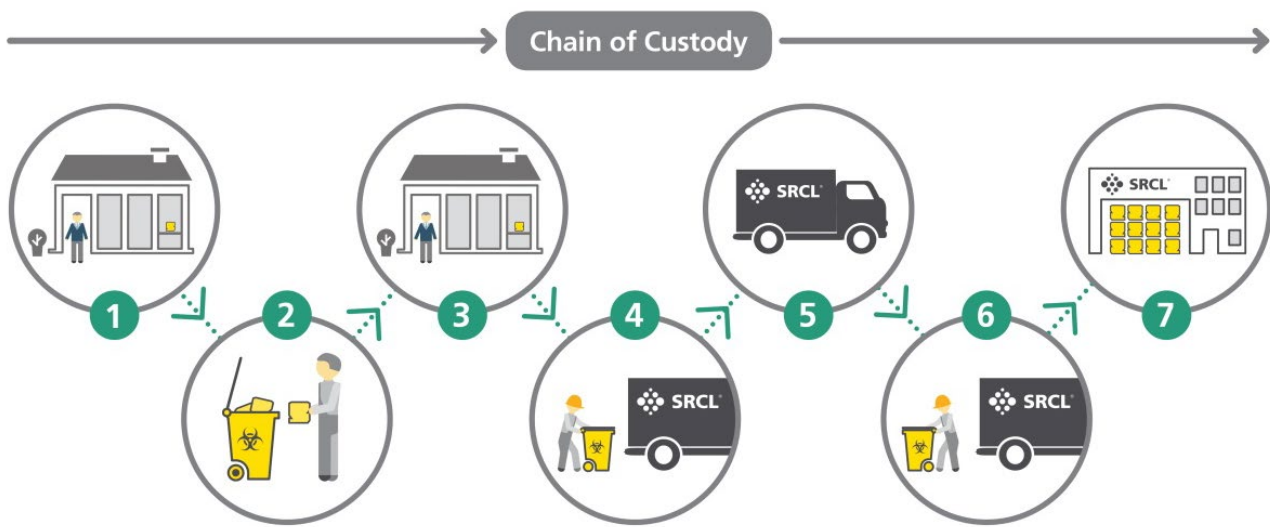
# Healthcare Waste - Chain of Custody

Every business in Ireland has a general duty of care (i.e. a responsibility) not to hold, transport, recover or dispose of their waste in a manner that will cause, or is likely to cause, environmental pollution.

This means that a waste producer, e.g. a healthcare / treatment facility, is responsible for their waste from the moment it's produced to the point of treatment and/or disposal.

Hazardous waste is subject to the European ADR transportation regulations, which specifies the legal responsibilities of all participants in the waste 'chain of custody'.

However, even after a business has handed over their waste to a third party (like Stericycle) they remain responsible for it until it is properly recovered, treated or disposed of. This is just one of the reasons why it is important to correctly segregate your



- |  |   |  |   |
|--|---|--|---|
| <p><b>1 PRODUCER/HOLDER</b><br/>Any business whose activities produce waste.</p>   | <p><b>3 CONSIGNOR</b><br/>The business handing over the waste for transportation – can be the same as producer/holder.</p>            | <p><b>5 CARRIER</b><br/>The business that collects the waste.</p>  | <p><b>7 CONSIGNEE</b><br/>The business who receives the waste for treatment, recycling, recovery or disposal.</p> |
| <p><b>2 PACKER</b><br/>The individual or business is responsible for the final packaging of dangerous goods prior to transportation.</p> | <p><b>4 LOADER</b><br/>The individual or business responsible for loading dangerous goods onto a vehicle prior to transportation.</p> | <p><b>6 UNLOADER</b><br/>The individual or business responsible for the removal of dangerous goods from a vehicle.</p> |   |

**Failing to follow the recognised waste segregation colour coding system - or using packaging that had not been UN tested and approved - can result in accident or injury to persons and the environment, even after the waste has left your facility, putting your practice at risk of legal and financial penalties for not having segregated and packaged the waste correctly in the first instance.**



# Healthcare Risk Waste Primary Packaging

**Yellow Bags**  
UN 3291



NO FREE LIQUIDS



NO SHARPS

**Bags must NEVER contain sharps or rigid items likely to puncture the bag**

**UN approved and designed for containment of 'soft' waste only**

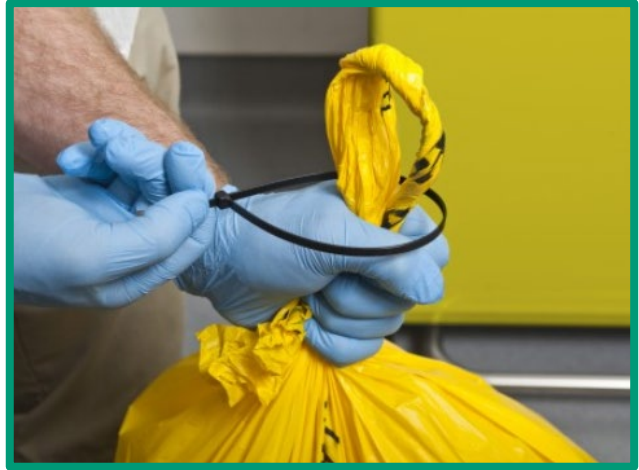
- ✓ Blood stained or contaminated items, swabs, bandages, personal protective equipment i.e. gowns, aprons, gloves
- ✓ Suction catheters and tubing
- ✓ Waste contaminated with known or suspected infections

**Bags should be filled NO MORE than two thirds full**

**They should be sealed at the point of production by twisting, swan-necking & securing**



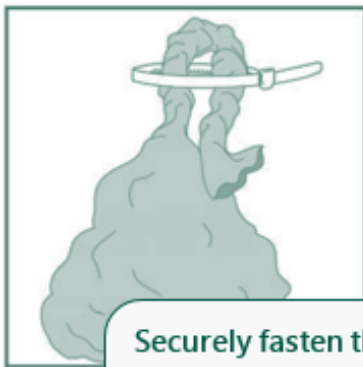
## How to securely tie a healthcare risk waste bag: the 'swan-neck' method



When the bag is filled to the warning line (or two thirds) twist the excess at the top of the bag ...



Double over and hold the twist firmly ...



Securely fasten the bag, either by knotting the twisted neck of the bag or by passing a tie (e.g. cable) over the twisted neck ...



... If using a tie, ensure it is fastened tightly to create an effective seal.





# Healthcare Risk Waste Primary Packaging

## Pedal Bins



**NO FREE LIQUIDS**



**NO SHARPS**

**NEVER** to be used for the disposal of free liquids or sharps

Indoor pedal bins should be lined with UN approved yellow bags for containment of 'soft' waste only.

See page 5 for guidance on waste that can be disposed of in yellow bags.

- ✓ Fold the top of the bag outwards over the rim of the pedal bin to avoid any waste being trapped between the bag and the bin.
- ✓ Lining bags should be sealed before removing from the pedal bin by twisting, swan-necking & securing (see page 6 for guidance).

**Foot pedal action for HANDS FREE operation in line with infection control procedures**

**Lining bags should be filled NO MORE than two thirds full**



# Healthcare Risk Waste Primary Packaging

## Sharps Boxes UN 3291



**NO FREE LIQUIDS**

**Sharps boxes must NEVER be used for the disposal of free liquids**

**Sharps boxes must NEVER be placed into healthcare waste bags**

### UN approved containment of:

- Needles and syringes, scalpels, sharp tips of IV sets
- Contaminated slides, stitch cutters, guide wires and razors
- Blood stained or contaminated glass
- Any other contaminated item likely to puncture a bag

**Any of the above contaminated with cytotoxic or pharmaceutical medicines MUST be disposed of in a purple lidded sharps box (see page 10)**

**Sharps boxes must be filled no more than three-quarters full, OR to the fill-line pre-marked on the container, whichever maximum is reached first**





# Healthcare Risk Waste Primary Packaging

## Rigid Containers with Yellow Lids



NO FREE LIQUIDS



NO SHARPS

### For the containment of:

- Autoclaved microbiological cultures
- Contained blood and body fluids with absorbent
- Non-soft infectious waste items (no loose sharps, no heavy metals)
- Hard plastic disposable items

**NEVER to be used for the disposal of free liquids or sharps**

**NEVER to be used for the disposal of heavy metal objects**

**They should be filled to maximum of three-quarters full, OR to the fill-line marked on the container, OR to the ADR permitted weight - whichever is reached first**

ADR permitted maximum weights:  
30L container – 15KG  
60L container – 30KG



# Healthcare Risk Waste Primary Packaging

**Purple Lidded Sharps Boxes  
UN 3291**



**NO FREE LIQUIDS**

**UN approved containment of:**

- Needles, syringes, sharp instruments, cartridges and broken glass used in the administration of cytotoxic drugs
- Unused medicines

**Sharps boxes must NEVER be used  
for the disposal of free liquids**

**Sharps boxes must NEVER be placed  
into healthcare waste bags**

**Sharps boxes must be filled no  
more than three-quarters full,  
OR to the fill-line pre-marked on  
the container, whichever  
maximum is reached first**



# Healthcare Risk Waste Primary Packaging

**Rigid Containers  
with Purple Lids**



**NO FREE LIQUIDS**



**NO SHARPS**

**NEVER to be used for the  
disposal of free liquids or sharps**

**For the containment of:**

- ✓ Non-sharps cytotoxic waste, and left over cytotoxic drug preparations
- ✓ Out of date medicines or unused pharmaceuticals left over after administration to patients
- ✓ Denaturing kits (see page 9)

**Purple lidded containers must NEVER be placed in secondary containment wheeled bins – these containers must NEVER be mixed with yellow lidded containers**

**ALWAYS disposed of via high temperature incineration**

**They should be filled to maximum of three-quarters full, OR to the fill-line marked on the container, OR to the ADR permitted weight - whichever is reached first**

**ADR permitted maximum weights:  
30L container – 15KG  
60L container – 30KG**



# Healthcare Risk Waste Primary Packaging

**Rigid Containers  
with Black Lids**



**NO FREE LIQUIDS**



**NO SHARPS**

**For the containment of:**

- ✓ Recognisable anatomical waste and placenta
- ✓ Blood or tissue suspected of CJD contamination
- ✓ Non-autoclaved risk Group 2 and 3 laboratory cultures
- ✓ Large or bulk metal objects e.g. titanium hip joints, laryngoscope blades

**ALWAYS disposed of via high temperature incineration**

**NEVER to be used for the disposal of free liquids or sharps**

**Contents must be stabilised with absorbent material if volume liquids present**

**They should be filled to maximum of three-quarters full, OR to the fill-line marked on the container, OR to the ADR permitted weight - whichever is reached first**

**ADR permitted maximum weights:  
30L container – 15KG  
60L container – 30KG**



# Healthcare Risk Waste

## Secondary containment

### Wheeled Bins



Where waste volumes justify them, UN approved wheeled bins are used for the storage of primary containers awaiting off-site transportation.

Yellow bags, white or yellow lidded sharps boxes and yellow lidded rigid containers destined for Stericycle should be contained within one wheeled bin.

Wheeled bins are bar-coded to ensure traceability through electronic tracking (Steriworks) from generation to final disposal.

Purple lidded containers are NEVER to be placed in wheeled bins.



NO FREE LIQUIDS



NO SHARPS

Wheeled bins **MUST** be kept in a secure location, away from the public and kept locked at all times.

Primary packaging should be **PLACED** into wheeled bins, **NEVER** thrown or dropped as this can compromise the primary packaging and lead to injury



# Healthcare Risk Waste Waste Storage Area

A waste storage area (sometimes referred to as the 'waste marshalling area') should be designated for waste awaiting collection by Stericycle, large enough for the volume of waste generated in the period of time between scheduled collections.

The waste storage area should not be accessible to the public and should have clear warning signs on all entrances to the area indicating the presence of healthcare risk waste.

The storage area should be:

- Well ventilated, well drained and covered
- Enclosed with lockable entrances
- Secure from interference from unauthorised persons, children or animals
- Easily accessible to collection vehicles

Wheeled bins should be stored with their lids closed, and the lids should be securely locked when the bins are full.

**All employees involved in the generation and handling of healthcare waste should have an understanding of the importance of ensuring that it is correctly segregated and prepared for collection to enable safe disposal.**



**If you have any questions please contact  
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