



60 Years

Atoms for Peace and Development

# Factsheet for Decision Makers

## Radiation Protection of the Public

## CONSUMER PRODUCTS

### Why is it important?

Some consumer products contain small amounts of radioactive material that have been intentionally added. This radioactive material is essential for the correct operation of the consumer product in question.

A number of such products are currently widely available for the use by members of the public. They are marketed and sold around the world, including over the internet. Manufacture and supply to the public needs to be justified and must be authorized by the regulatory body.

### What do I need to know?

The typical consumer products available to the general public are ionization chamber smoke detectors (ICSDs), some products using luminous paint or containing gaseous tritium light sources, high intensity lamps containing krypton-85 and tungsten welding electrodes containing thorium.

Some consumer products may be sold directly to the public through commercial outlets, while others are intended for specialist use by professionals but may still be purchased by members of the public.

Some gemstones are treated with radiation to improve their colour characteristics, thereby increasing also their commercial value. Irradiated gemstones may contain radionuclides in the form of activation products. Some irradiated gemstones need to be stored prior to sale to allow the induced radioactivity to decay.

Because they represent a very low level of risk, such consumer products can be sold or made available to the public without special surveillance or regulatory control after sale.

### IAEA Safety Standards

for protecting people and the environment

### Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards

Jointly sponsored by  
EC, FAO, IAEA, ILO, OECD/NEA, PAHO, UNEP, WHO



General Safety Requirements Part 3  
No. GSR Part 3



IAEA  
International Atomic Energy Agency

The International Basic Safety Standards (BSS) are the international benchmark for radiation safety. The BSS are used in many countries as the basis for national legislation to protect workers, patients, the public and the environment from the risks of ionizing radiation.

The BSS are based on the most recent scientific evidence on the effects of ionizing radiation and take into account practices and experiences from around the world in the use of ionizing radiation and nuclear techniques. Eight international organizations sponsor the BSS.

### What actions are required?



The regulatory body is responsible for authorizing the manufacture of consumer products and the radiation treatment of gemstones.

The regulatory body needs to take into account that these products are intended for sale to the public during the authorization process.

The manufacturer or supplier is required to carry out a safety assessment to demonstrate that the consumer products are intrinsically safe i.e. they meet the requirements for exemption from regulatory control.

The manufacturer or supplier is required to comply with criteria for labelling of consumer products and for providing information on recycling or disposal options.



### Resources

Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, No. GSR Part 3  
[http://www-pub.iaea.org/MTCD/publications/PDF/Pub1578\\_web-57265295.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/Pub1578_web-57265295.pdf)

Exemption from Regulatory Control of Goods Containing Small Amounts of Radioactive Material  
[http://www-pub.iaea.org/MTCD/publications/PDF/TE\\_1679\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/TE_1679_web.pdf)

Radiation Safety for Consumer Products  
<http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1691Web-38192355.pdf>