



Environment and Recycling

Abstract

Environment friendliness and recyclability are important topics in modern life. In this white paper is detailed to which standards Sense-WARE flame detectors and flame detector accessories comply.

Problem Statement

Environment and recyclability are import items is modern product design and manufacturing. The are both important for the compliance of the manufacturer and of the user of equipment.

Compliance with the regulations

Sense-WARE products comply to the following relevant standards.



Regulation	Issued By	Scope	Acronym
REACH	European Union	All industry	Registration, Evaluation, Authorisation and Restriction of Chemicals
RoHS	European Union	Electric and Electronics Industry	Restriction of Hazardous Substances
China RoHS	China	Electric and Electronics Industry	Restriction of Hazardous Substances
WEEE	European Union	Electric and Electronics Industry	Waste of Electrical and Electronic Equipment

Background

In this section gives a brief summary on how Sense-WARE complies to regulation for restriction of chemicals and what it did on the recyclability of its products.





Recyclability

In the following table the recyclability of the Sense-WARE portfolio of products is listed:

Model name	Materials used	Recyclability
Flame detectors		
UV-185-5/1CZ, UV/IR-210/1CZ, IR3-109/1CZ	GRP pressure molded enclosure, printed circuit board, metal fasteners, rubber seal, sapphire window, RoHS compliant soldering material. No use of radioactive elements and no use of asbestos!	Good
Swivel mounts		
	Injection molded polyamide parts, Stainless steel fasteners	Good
Test lamps, non EX		
T-229/4P, T-169 a	ABS enclosure, stainless steel fasteners, printed circuit boards, fasteners, wiring, bulb, steel protection grill, RoHS compliant soldering material. No use of radioactive element sand no use of asbestos!	Good
Test lamp, intrinsically safe		
T-940/1Z	Aluminum enclosure, printed circuit boards wiring, fasteners. RoHS compliant soldering material No use of radioactive elements and no use of asbestos!	Good
Test lamp battery		
BATT4P	Sealed lead acid battery, plastic and lead Remark This battery contains lead. Lead is listed in the REACH, RoHS and China RoHS, because lead is a hazardous compound. The lead is, however encapsulated and sealed lead acid batteries have a good recyclability	Good
Test lamp charger		
CH4P	Printed circuit board, RoHS compliant soldering material	Good
Test lamp light bulb		
BULB4P	Quartz and metal	Good
Packing material		
-	Corrugated cardboard	Good

References

- https://en.wikipedia.org/wiki/Registration,_Evaluation,_Authorisation_and_Restriction_of_Chemicals
- https://en.wikipedia.org/wiki/Waste_Electrical_and_Electronic_Equipment_Directive
- https://en.wikipedia.org/wiki/Restriction_of_Hazardous_Substances_Directive
- REACH <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32006R1907>
- RoHS <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32011L0065>
- WEEE <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:197:0038:0071:en:PDF>
- Sense-WARE MSDS on lead acid battery
- Sense-WARE Self declaration of compliance to REACH, RoHS and WEEE regulations

Conclusion

The Sense-WARE flame detectors and accessories are designed and manufactured according to the latest revisions of environmental regulations and do have a good recyclability.