

© Copyright SEK. Reproduction in any form without permission is prohibited.

Insamling, hantering och behandling av uttjänta hushållsapparater som innehåller flyktiga fluorkarboner eller flyktiga kolväten

Collection, logistics & treatment requirements for end-of-life household appliances containing volatile fluorocarbons or volatile hydrocarbons

Som svensk standard gäller europastandarden EN 50574:2012. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50574:2012.

ICS 13.030.30; 13.030.40; 97.030

Denna standard är fastställd av SEK Svensk Elstandard, som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. Telefax: 08 - 444 14 30
E-post: sek@elstandard.se. Internet: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

Collection, logistics & treatment requirements for end-of-life household appliances containing volatile fluorocarbons or volatile hydrocarbons

Exigences de collecte, logistique et traitement pour la fin de vie des appareils domestiques contenant des fluorocarbures volatils ou des hydrocarbures volatils

Anforderungen an die Sammlung, Logistik und Behandlung von Altgeräten aus dem Haushalt die flüchtige Fluorkohlenwasserstoffe oder flüchtige Kohlenwasserstoffe enthalten

This European Standard was approved by CENELEC on 2012-03-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Contents

Foreword	3
Introduction.....	4
1 Scope.....	5
2 Normative references	5
3 Abbreviations, terms and definitions	5
3.1 Abbreviations	5
3.2 Terms and definitions	6
4 Requirements prior to treatment	9
4.1 General	9
4.2 Site requirements	9
4.3 Transportation	9
4.4 Sorting	10
4.5 Compliance criteria	10
5 Requirements for treatment facilities	10
5.1 General	10
5.2 Step 1 treatment.....	11
5.3 Step 2 treatment.....	11
5.4 Step 3 treatment.....	11
5.5 Monitoring	12
5.6 Regular reporting	13
5.7 Compliance criteria	14
6 Responsible take-back party — General.....	14
Annex A (normative) Methodology for running performance tests for step 1 treatment	16
A.1 Introduction	16
A.2 Operating conditions, test preparation, and test procedures of the performance test	16
A.3 Calculations for performance test step 1.....	18
Annex B (normative) Methodology for running performance tests for step 2 treatment	22
B.1 Introduction	22
B.2 Operating conditions, test preparation, and test procedures of the performance test	22
B.3 Calculations performance test step 2.....	25
Annex C (informative) Overview of monitoring requirements at treatment facilities	32
Annex D (informative) Sorting requirements for heat pump tumble driers - Instructions for identifying tumble dryers containing fluorinated refrigerants	33
D.1 Introduction	33
D.2 Identification of heat pump tumble dryers with VFC	33

Foreword

This document (EN 50574:2012) was prepared by CLC/TC 111X/WG 04, "Environment - End of life requirements for household appliances containing volatile fluorinated substances or volatile hydrocarbons".

The following dates are fixed:

- latest date by which this document has to (dop) 2013-03-26
be implemented at national level by
publication of an identical national standard
or by endorsement
- latest date by which the national standards (dow) 2015-03-26
conflicting with this document have to
be withdrawn

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Introduction

This document establishes requirements for the transportation, sorting and treatment of household appliances containing volatile fluorocarbons or volatile hydrocarbons after they have been discarded as waste electrical and electronic equipment (WEEE).

The methodologies for the inspection of the performance of treatment systems for household refrigerators and freezers in step 2 treatment was developed in the early 1990s. The methodologies used for performance tests since then have been created to evaluate the efficiency of treatment plants designed to recover VFCs from insulating foam. The evaluation criteria used for performance testing are based on the VFC content of household refrigerators and freezers that were produced in the 1970s and 1980s.

The increasing appearance on the recycling market of appliances with VFC-free insulation (foamed with VHC) has had a strong impact on the general framework conditions for performance testing over the last few years. In the early 1990s the quantity of R11 (a VFC) was reduced by approximately 50 %. R11 was then largely phased out in favour of VHCs in the early 2000s.

Consequently the expected values from step 2 treatment that had been achieved in the 1990s are no longer applicable for the appliances that are recycled today. Nowadays more and more VFC-free appliances and appliances containing reduced quantities of VFC come back for recycling.

The WEEE within the scope of this standard could contain substances that if released untreated to the atmosphere could contribute to ozone depletion or global warming. The substances may be present in the refrigerating system and in insulating foam. This standard seeks to reduce the environmental impact caused by such WEEE by defining requirements covering sorting, transportation, handling and treatment. It covers how substances with a high global warming potential and/or ozone depletion potential are removed from WEEE and subsequently treated so as to significantly reduce environmental impacts.

By addressing the above issues this standard supports the WEEE Directive 2002/96/EC.

1 Scope

This European Standard defines requirements for the end of life handling, transportation, storage, sorting and treatment of WEEE household appliances containing volatile fluorocarbons, volatile hydrocarbons, or both. Furthermore, this European Standard only applies to WEEE household appliances that use heat-transfer media other than water e.g. refrigerators, freezers, heat pump tumble dryers, de-humidifiers and portable air conditioners. Discarded appliances covered by this European Standard will have been deposited at a collection facility as domestic WEEE.

The European Standard describes requirements for the removal of volatile fluorocarbons and volatile hydrocarbons. These substances can be found as refrigerant in the refrigerating system (partly dissolved in the oil) and as blowing agent in the insulating foam of discarded household appliances.

NOTE This European Standard has been prepared to fulfil the requirements of Directive 2002/96/EC but does not preclude the procedures described herein from being used to treat appliances that are not commonly found in private households.

It defines requirements pertaining to producers, WEEE compliance schemes (acting on behalf of producers) and waste treatment facilities so as to ensure the provisions of applicable national laws resulting from European legislation are fulfilled. These requirements are intended to define procedures, parameters based on the best available technologies at the time of the publication; however, provisions laid down by national regulatory bodies will continue to additionally apply. This standard only describes the results to be achieved, it does not specify how they are to be achieved nor does it prescribe the use of any specific technology.

This European Standard does not generally cover collection facilities, nor does it cover how appliances arrive at these facilities. However, this standard does address the sorting of heat-pump tumble dryers from other types of tumble dryer, a task that could be performed at a collection facility.

This European Standard defines requirements relating to handling, transportation, sorting and treatment of WEEE covered by the scope of this standard. This standard does not include any activity prior to delivery to a logistic facility.

2 Normative references

None