CHAPTER 14 CHEMICAL CONTENT OF PRODUCT CARRIERS AND PACKING MATERIALS

INTRODUCTION

AMD is committed to enhancing the quality of life and protecting the environment of the communities in which it does business. This chapter provides an overview of AMD's Environmental, Health, and Safety Annual Report and information on the recyclability and chemical content of the materials AMD uses to pack its product (including product carriers).

AMD'S EHS ANNUAL REPORT

AMD has developed a single, universal set of Environmental, Health, and Safety (EHS) performance standards or "Best Practices" that govern its operations worldwide. AMD's Environmental, Health, and Safety Annual Report provides details on these EHS initiatives and programs, and reports on the progress AMD has made towards achieving its long-term EHS goals. A copy of this report is available online at AMD's web site (www.amd.com) under "Corporate \ Environmental Health and Safety," or from your local AMD sales representative.

PACKING MATERIALS CONTENT

Details about the recyclability of the materials AMD uses to pack product are provided on *page 14-2*. The chemical content of these materials is provided on *page 14-4*, along with a list of the hazardous chemicals *not* present on *page 14-5*.

Contact your AMD sales representative for more information on AMD's efforts to continuously improve the recyclability of its packing materials and product carriers. For information on the chemicals that are used in AMD's products, contact your AMD sales representative.

TRAY RECYCLING PROGRAM

AMD has made arrangements with select recycling companies for them to accept AMD's trays from customers at no charge. Either the recycling company or AMD will cover all costs incurred, thus providing AMD's customers with a cost-free recycling option for trays. The table on *page 14-6* provides a list, per geographical region, of these recycling companies. Although AMD has tried to arrange for its customers to be able to return any device tray, regardless of whether it was sent by AMD, this cannot be guaranteed in all cases. Confirmation must be made with the recycling supplier when arranging for shipment.

When packing trays for shipment, the trays should be packed to ensure no damage is incurred. They should be stacked, uniformly aligned by the chamfered corner of the tray, and secured in bundles wrapped in cushioning materials for protection. (Reuse of the original packing materials is encouraged.) The recycling vendor should be contacted before shipping the trays so that they can identify which freight carrier to use.

These companies may also accept other materials for recycling, and AMD encourages its customers to contact them for further information.

Recyclability of Packing Materials and Product Carriers

Container	Material	Recycling Remark
Bubble Pack Filler	Polyethylene	Recyclable[3]
Carrier Tape (T&R)	Polystyrene material	Recyclable; contact the Vinyl Institute[1]
Cover Tape (T&R)	Antistatic coated, polyester material	Cannot be recycled.
Dessicant	Aluminosilicate clay packed in Tyvek™, spun-bonded polyolefin type II pouches.	Reusable (bake at 125°C ± 5°C for 10–16 hours)
Dry Pack Bag	Three layers: (1) static-dissipative polyethylene (2) aluminum metallized to polyester (3) aluminum metallized to static-dissipative polyester	Cannot be recycled
End Cushions for Tubes	Polyethylene	Recyclable (see list on *page 14-6*)
End Plugs and Pins for Tubes	Permanently dissipative PolyVinyl Chloride (PVC) plugs	Recyclable; contact the Vinyl Institute[1]
Humidity Indicator Cards	Paper and cobalt chloride	Reuse[2] or recycle with paper
Jewel Boxes	Conductive, carbon-filled polypropylene; the inserts are black, dissipative K660-05-PVC, and the cushion pad is dissipative black foam	Recyclable (see list on *page 14-6*)
Labels	Paper and adhesive	Can be recycled with the box
Outer Container Box	Brown, corrugated cardboard containing 30–35% recycled material	Recyclable
Q-PACK Boxes	Brown, corrugated cardboard containing 30–35% recycled material; conductive coating on the inside; print is green, water-soluble ink	Recyclable
Reels	Antistatic coated, PS (Polystyrene) reel; AMD buys recycled reels whenever possible.	Recyclable (see list on *page 14-6*)
Sealing Tape	PVC/Paper	Not recyclable; can segregate from box
Shielding Bag	Polyester polyethylene aluminum	Cannot be recycled (not used for product shipments except in the case of samples)
Surf Tape	Conductive ABS Alloy with black carbon	Not recyclable
Trays	Acrylonitrile Butadience Styrer (ABS); Modified Polyphenylene Oxide (MPPO); Modified Poly Sulfone (MPSU)	Recyclable (see list on *page 14-6*)
Tray Straps	Carbon loaded polypropylene	Recyclable (see list on *page 14-6*)
Tubes and Stopper Pins	Antistatic coated PVC	Contact the Vinyl Institute[1]

Notes:

1 The Vinyl Institute is a U.S. trade association representing the leading manufacturers of PVC and associated products. They maintain a worldwide listing of PVC recycling companies, and they can be reached at 1-800-969-8469.

2 Before reusing, bake the card for 10–15 minutes at 125°C ± 5°C.

3 AMD uses Korita Packaging Limited, in Thailand, to recycle the bubble pack AMD uses. They can be reached at (662) 517-8527, or by fax: (662) 517-3579.

Chemical Content of Packing Materials

Container	Material	Percentage Composition (ppm)
End Plugs and Pins	Cadmium (stabilizer cd/Ba/Zn) and compounds	85.0
	PVC	3144.00–5233.00
	Heavy metal additives (metal)	0.00–5.30
	Zinc and compounds that include zinc chromate	0.00–0.80
Outer containers and Q-PACK™ boxes	Antimony and compounds	0.05 (ink)
	Arsenic and compounds	0.05 (ink)
	Barium and compounds	1.0 (ink)
	Cadmium and compounds	0.3 (paper); 0.005 (ink)
	Lead and compounds	0.33 (paper); 1.8 (ink)
	Mercury and mercury compounds	0.1 (glue); 0.05 (paper); 0.05 (ink)
	Selenium and compounds	0.07 (ink)
Shipping Tubes	Organo-tin compounds	200.00–300.00
	PVC (CAS# 9002-86-2)	8000.00–9300.00

Summary of Hazardous Chemicals Not Present in Packing Materials

Acrylamide	Ethyleneimine	Nickel and compounds
4-Aminobiphenyl and its salts	4-trans-pentyl-cyclohexyl benzonitrile	Organo-tin compounds
Asbestos	Fluorinated polymers	1,1,1, 2-Tetrachloroethane
Azo Dyes	Gallium	Paper Phenol circuit cards
Azoxylbenzene	Glycol ethers	Perfluorocarbons
Benzene	Halons	Phenylcyclohexane
Benzidine	Halogenated benzenes	Polychlorinated phenols
Beryllium and Compounds	Haologenated idphenyl ethers	Radioactive materials
Carbon tetrachloride	Halogenated napthalenes	Radioactive substances
Cellulose nitrate plastic polymers	Halogenated triphenyls	Rhenium
Chlorofluorocarbons	Hexachlorobutadiene	Rubidium
Chloroform	Indium	Samarium
Chromium and compounds	Lead carbonate	Silver and compounds
Cobalt and compounds	Lead hydrocarbonate	Strontium
Cynanide	Lead sulfate	Tellerium
Dimethylacetamide	Magnesium	Thallium and compounds
Dimethylformamide	Methyl benzene (toluene)	Vinyl acetate
Dioxins and furans	Methylene dianiline	Vinilideine chloride
Epichlorohydrin	Molybdenum	Yttrium
		Xylene

Recommended Recycling Companies for Plastic Materials

Customer Location	Recycling Company and Locations	
Americas	Micro Plastics, Inc. 3420 West Whitton Avenue Phoenix, Arizona 85017 tel: 011-602-278-4545 fax: 011-602-278-4477 Contact: Mike Drake	Mr. Larry Worth 2136-A Rutland Drive Austin, TX 78758 tel: 512-339-4684 fax: 512-339-8121 email: larry_worth@peakf.com
	Ecological Technologies, Inc. (also known as EcoTech) 3281 Keller Street Santa Clara, CA 95054 tel: 408-988-2050 fax: 408-988-4009 email: info@eco-tech.com Contact: Mr. John Eames	Re-Source America 507 Lakeside Drive Southampton, PA 19866 tel: 1-800-542-8282 fax: 1-215-322-6805 email: ml_robinson@email.msd.com Contact: Mary Robinson
Asia and Japan	Precise Connector Tooling Pte LTD 91 Defu Lane 10 Swee Hin Building, #03-00 Singapore 539221 tel: 65-2868939 fax: 65-2860919 email: pctpl@singnet.com.sg Contact: Leslie Toh or TS Wong	Int'l Trade Commerce Building Unit B, 21/F, Nan Hu Road, Shenzhen, China Post Code: 518014 tel: 86-755-2206589/2297966 fax: 86-755-2280209 email: charles_chiang@peak.comhk Contact: Mr. Charles Chiang
	Tung-Jetek Co. Ltd 6F-3, No. 94 Bau-Chung Road Hsin Tien City, Taipei Hsien Taiwan, R.O.C. tel: 886-2-29162199 fax: 886-2-29162196 email: jc_liu@peak.com.hk Contact: Mr. JC Liu	Semicycle Resources (S) Pte LTD 84 Genting Lane, #06-02 Cityneon Design Centre Singapore 349584 tel: 65-842-7557 fax: 65-842-0231 email: hp_lem@peakf.com Contact: Mr. HP Lem
	SAEM Technology Company Room 401, 4/F, Seodo Bldg 234-8, Jamsil-Bondong Songpa-ku, Seoul, Korea tel: 82-2-423-9246/7 fax: 82-2-423-9248 Contact: Mr. CS Park	
Europe[1]	AMD (UK) LTD European Service Centre c/o Hellmans International Hellmans House Lakeside Industrial Estate Colnbrook Slough, Berks, U.K. tel: 011-44-1276-803100 fax: 011-44-1276-803208 AMD contact: Ronnie McDonald (ronnie.mcdonald@amd.com)	Ms. Veronique Borter 37-39 Rue de Vermont 1202 Geneva, Switzerland tel: 4122 733 6282 fax: 4122 734 1479 email: veronique.borter@swissonline.ch.

Note:

1 Customers in Europe also have the option of sending their used device trays to AMD's facility in the United Kingdom. To do this, use the Circle Air Freight company and ship the trays collect to the address provided. Circle Air will cover freight, and Hellmans International will handle duty and customs clearance, both to be reimbursed by AMD.