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§ 770.1 INTRODUCTION

In this part, references to the EAR are references to 15 CFR chapter VII, subchapter C. This part provides commodity, technology, and software interpretations. These interpretations clarify the scope of controls where such scope is not readily apparent from the Commerce Control List (CCL) (see Supplement No. 1 to part 774 of the EAR) and other provisions of the Export Administration Regulations.

§ 770.2 ITEM INTERPRETATIONS

(a) Interpretation 1: Anti-friction bearing or bearing systems and specially designed parts

(1) Anti-friction bearings or bearing systems shipped as spares or replacements are classified under Export Control Classification Number (ECCN) 2A001 (ball, roller, or needle-roller bearings and parts). This applies to separate shipments of anti-friction bearings or bearing systems and antifriction bearings or bearing systems shipped with machinery or equipment for which they are intended to be used as spares or replacement parts.

(2) An anti-friction bearing or bearing system physically incorporated in a segment of a machine or in a complete machine prior to shipment loses its identity as a bearing. In this scenario, the machine or segment of machinery

containing the bearing is the item subject to export control requirements.

(3) An anti-friction bearing or bearing system not incorporated in a segment of a machine prior to shipment, but shipped as a component of a complete unassembled (knocked-down) machine, is considered a component of a machine. In this scenario, the complete machine is the item subject to export license requirements.

(b) Interpretation 2: Classification of “parts” of machinery, equipment, or other items

(1) **An assembled machine or unit of equipment is being exported.** In instances where one or more assembled machines or units of equipment are being exported, the individual component parts that are physically incorporated into the machine or equipment do not require a license. The license or general exception under which the complete machine or unit of equipment is exported will also cover its component parts, provided that the parts are normal and usual components of the machine or equipment being exported, or that the physical incorporation is not used as a device to evade the requirement for a license.

(2) **Parts are exported as spares, replacements, for resale, or for stock.** In instances where parts are exported as spares, replacements, for resale, or for stock, a license is required only if the appropriate entry for the part specifies that a license is required for the intended destination.

(c) [RESERVED]

(d) Interpretation 4: Telecommunications equipment and systems

Control equipment for paging systems (broadcast radio or selectively signalled receiving systems) is defined as circuit switching equipment in Category 5 of the CCL.

(e) Interpretation 5: Numerical control systems.

(1) Classification of “Numerical Control” Units. “Numerical control” units for machine tools, regardless of their configurations or architectures, are controlled by their functional characteristics as described in ECCN 2B001.a. “Numerical control” units include computers with add-on “motion control boards”. A computer with add-on “motion control boards” for machine tools may be controlled under ECCN 2B001.a even when the computer alone without “motion control boards” is not subject to licensing requirements under Category 4 and the “motion control boards” are not controlled under ECCN 2B001.b.

(2) Export documentation requirement.

(i) When preparing a license application for a numerical control system, the machine tool and the control unit are classified separately. If either the machine tool or the control unit requires a license, then the entire unit requires a license. If either a machine tool or a control unit is exported separately from the system, the exported component is classified on the license application without regard to the other parts of a possible system.

(ii) When preparing the Electronic Export Information (EEI) on the Automated Export System (AES), a system being shipped complete (i.e., machine and control unit), should be reported under the Schedule B number for each machine. When either a control unit or a machine is shipped separately, it should be reported under the Schedule B number appropriate for the individual item being exported.

(f) Interpretation 6: “Parts,” “accessories,” and equipment exported as scrap

“Parts,” “accessories,” or equipment that are being shipped as scrap should be described on the

EEI filing to the AES in sufficient detail to be identified under the proper ECCN. When commodities declared as “parts,” “accessories,” or equipment are shipped in bulk, or are otherwise not packaged, packed, or sorted in accordance with normal trade practices, the Customs Officer may require evidence that the shipment is not scrap. Such evidence may include, but is not limited to, bills of sale, orders and correspondence indicating whether the commodities are scrap or are being exported for use as “parts,” “accessories,” or equipment.

(g) Interpretation 7: Scrap arms, ammunition, and implements of war

Arms, ammunition, and implements of war, as defined in the U.S. Munitions List, and are under the jurisdiction of the U.S. Department of State (22 CFR parts 120 through 130), except for the following, which are under the jurisdiction of the Department of Commerce:

(1) Cartridge and shell cases that have been rendered useless beyond the possibility of restoration to their original identity by means of excessive heating, flame treatment, mangling, crushing, cutting, or by any other method are “scrap”.

(2) Cartridge and shell cases that have been sold by the armed services as “scrap”, whether or not they have been heated, flame-treated, mangled, crushed, cut, or reduced to scrap by any other method.

(3) Other commodities that may have been on the U.S. Munitions List are “scrap”, and therefore under the jurisdiction of the Department of Commerce, if they have been rendered useless beyond the possibility of restoration to their original identity only by means of mangling, crushing, or cutting. When in doubt as to whether a commodity covered by the Munitions List has been rendered useless, exporters should consult the Directorate of Defense Trade Controls, U.S. Department of State, Washington,

D.C. 20520, or the Exporter Counseling Division, Office of Exporter Services, Room 1099A, U.S. Department of Commerce, Washington, D.C. 20230, before reporting a shipment as metal scrap.

(h) [RESERVED]

(i) [RESERVED]

(j) [RESERVED]

(k) Interpretation 11: Precursor chemicals

The following chemicals are controlled by ECCN 1C350. The appropriate Chemical Abstract Service Registry (C.A.S.) number and synonyms, (i.e., alternative names) are included to help you determine whether or not your chemicals are controlled by this entry.

(1) (C.A.S. #1341-49-7) Ammonium hydrogen bifluoride

Acid ammonium fluoride
Ammonium bifluoride
Ammonium difluoride
Ammonium hydrofluoride
Ammonium hydrogen bifluoride
Ammonium hydrogen difluoride
Ammonium monohydrogen difluoride

(2) (C.A.S. #7784-34-1) Arsenic trichloride

Arsenic (III) chloride
Arsenous chloride
Fuming liquid arsenic
Trichloroarsine

**(3) (C.A.S. #76-93-7) Benzilic acid
alpha.,alpha.-Diphenyl-.alpha.-hydroxyacetic acid**

Diphenylglycolic acid
.alpha.,alpha.-Diphenylglycolic acid
Diphenylhydroxyacetic acid
.alpha.-Hydroxy-2,2-diphenylacetic acid
2-Hydroxy-2,2-diphenylacetic acid
.alpha.-Hydroxy-.alpha.-phenylbenzeneacetic acid

Hydroxydiphenylacetic acid

(4) (C.A.S. #107-07-3) 2-Chloroethanol

2-Chloro-1-ethanol
Chloroethanol
2-Chloroethyl alcohol
Ethene chlorohydrin
Ethylchlorohydrin
Ethylene chlorhydrin
Ethylene chlorohydrin
Glycol chlorohydrin
Glycol monochlorohydrin
2-Hydroxyethyl chloride

**(5) (C.A.S. #78-38-6) Diethyl ethylphosphonate
Ethylphosphonic acid diethyl ester**

(6) (C.A.S. #15715-41-0) Diethyl methylphosphonite

Diethoxymethylphosphine
Diethyl methanephosphonite
0,0-Diethyl methylphosphonite
Methyldiethoxyphosphine
Methylphosphonous acid diethyl ester

**(7) (C.A.S. #2404-03-7) Diethyl-N,
N-dimethylphosphoro- amidate
N,N-Dimethyl-O,O'-diethyl phosphoramidate
Diethyl dimethylphosphoramidate
Dimethylphosphoramidic acid diethyl ester**

(8) (C.A.S. #762-04-9) Diethyl phosphite

Diethoxyphosphine oxide
Diethyl acid phosphite
Diethyl hydrogen phosphite
Diethyo phosphonate
Hydrogen diethyl phosphite

(9) (C.A.S. #100-37-8) N,

N-Diethylethanolamine
N,N-Diethyl-2-aminoethanol
Diethyl (2-hydroxyethyl) amine
N,N-Diethyl-N-(.beta.-hydroxyethyl) amine
N,N-Diethyl-2-hydroxyethylamine
Diethylaminoethanol
2-(Diethylamino) ethanol
2-(Diethylamino)ethyl alcohol
N,N-Diethylmonoethanolamine

- (2-Hydroxyethyl) diethylamine
2-Hydroxytriethylamine
- (10)** (C.A.S. #5842-07-9)
N,N-Diisopropyl-.beta.-aminoethane thiol
2-(Diisopropylamino) ethanethiol
Diisopropylaminoethanethiol
.beta.-Diisopropylaminoethanethiol
2-(bis(1-Methylethyl)amino) ethanethiol
- (11)** (C.A.S. #4261-68-1) N,
N-Diisopropyl-.2-aminoethyl chloride
hydrochloride
- (12)** (C.A.S. #96-80-0)
N,N-Diisopropyl-.beta.-aminoethanol
N,N-Diisopropyl-2-aminoethanol
2-(Diisopropylamino) ethanol
(N,N-Diisopropylamino) ethanol
2-(Diisopropylamino) ethyl alcohol
N,N-Diisopropylethanolamine
- (13)** (C.A.S. #96-79-7)
N,N-Diisopropyl-.beta.-aminoethyl chloride
2-Chloro-N,N-diisopropylethanamine
1-Chloro-N,N-diisopropylaminoethane
2-Chloro-N,N-diisopropylethylamine
N-(2-chloroethyl)-N-(1-methylethyl)-2-prop
anamine
N-(2-Chloroethyl) diisopropylamine
N,N-Diisopropyl-2-chloroethylamine
1-(Diisopropylamino)-2-cholorethane
2-(Diisopropylamino)ethyl chloride
Diisopropylaminoethyl chloride
.beta.-Diisopropylaminoethyl chloride
- (14)** (C.A.S. #108-18-9) Diisopropylamine
N,N-Diisopropylamine
N-(1-Methylethyl)-2-propanamine
- (15)** (C.A.S. #6163-75-3) Dimethyl
ethylphosphonate
Dimethyl ethanephosphonate
Ethylphosphonic acid dimethyl ester
- (16)** (C.A.S. #756-79-6) Dimethyl
methylphosphonate
- Dimethoxymethyl phosphine oxide
Dimethyl methanephosphonate
Methanephosphonic acid dimethyl ester
Methylphosphonic acid dimethyl ester
- (17)** (C.A.S. #868-85-9) Dimethyl phosphite
Dimethoxyphosphine oxide
Dimethyl acid phosphite
Dimethyl hydrogen phosphite
Dimethyl phosphonate
Hydrogen dimethyl phosphite
Methyl phosphate
- (18)** (C.A.S. #124-40-3) Dimethylamine
N-Methyl methanamine
- (19)** (C.A.S. #506-59-2) Dimethylamine
hydrochloride
Dimethylammonium chloride
N-Methyl methanamine hydrochloride
- (20)** [RESERVED]
- (21)** (C.A.S. #1498-40-4) Ethylphosphonous
dichloride
Dichloroethylphosphine
Ethyl phosphonous dichloride
Ethyl dichlorophosphine
- (22)** (C.A.S. #430-78-4) Ethylphosphonus
difluoride
Ethyl difluorophosphine
- (23)** (C.A.S. #1066-50-8) Ethylphosphonyl
dichloride
Dichloroethylphosphine oxide
Ethanephosphonyl chloride
Ethylphosphinic dichloride
Ethylphosphonic acid dichloride
Ethylphosphonic dichloride
- (24)** [RESERVED]
- (25)** (C.A.S. #7664-39-3) Hydrogen fluoride
Anhydrous hydrofluoric acid
Fluorhydric acid
Fluorine monohydride

- Hydrofluoric acid gas
- (26) (C.A.S. #3554-74-3)
 3-Hydroxyl-1-methylpiperidine
 3-Hydroxy-N-methylpiperidine
 1-Methyl-3-hydroxypiperidine
 N-Methyl-3-hydroxypiperidine
 1-Methyl-3-piperidinol
 N-Methyl-3-piperidinol
- (27) (C.A.S. #76-89-1) Methyl benzilate
 Benzilic acid methyl ester
 .alpha.-Hydroxy-.alpha.-phenylbenzeneacetic acid methyl ester
 Methyl .alpha.-phenylmandelate
 Methyl diphenylglycolate
- (28) [RESERVED]
- (29) [RESERVED]
- (30) [RESERVED]
- (31) [RESERVED]
- (32) (C.A.S. #10025-87-3) Phosphorus oxychloride
 Phosphonyl trichloride
 Phosphoric chloride
 Phosphoric trichloride
 Phosphoroylchloride
 Phosphoroyltrichloride
 Phosphorus chloride oxide
 Phosphorus monoxide trichloride
 Phosphorus oxide trichloride
 Phosphorus oxytrichloride
 Phosphorus trichloride oxide
 Phosphoryl trichloride
 Trichlorophosphine oxide
 Trichlorophosphorus oxide
- (33) (C.A.S. #10026-13-8) Phosphorus pentachloride
 Pentachlorophosphorane
 Pentachlorophosphorus
 Phosphoric chloride
 Phosphorus(V) chloride
- Phosphorus perchloride
- (34) (C.A.S. #1314-80-3) Phosphorus pentasulfide
 Diphosphorus pentasulfide
 Phosphoric sulfide
 Phosphorus persulfide
 Phosphorus sulfide
- (35) (C.A.S. #7719-12-2) Phosphorus trichloride
 Phosphorus chloride
 Trichlorophosphine
- (36) C.A.S. #75-97-8) Pinacolone
 tert-Butyl methyl ketone
 2,2-Dimethyl-3-butanone
 3,3-Dimethyl-2-butanone
 2,2-Dimethylbutanone
 3,3-Dimethylbutanone
 1,1-Dimethylethyl methyl ketone
 Methyl tert-butyl ketone
 Pinacolin
 Pinacoline
 1,1,1-Trimethylacetone
- (37) (C.A.S. #464-07-3) Pinacolyl alcohol
 tert-Butyl methyl carbinol
 2,2-Dimethyl-3-butanol
 3,3-Dimethyl-2-butanol
 1-Methyl-2,2-dimethylpropanol
- (38) (C.A.S. #151-50-8) Potassium cyanide
- (39) (C.A.S. #7789-23-3) Potassium fluoride
 Potassium monofluoride
- (40) (C.A.S. #7789-29-9) Potassium hydrogen fluoride
 Hydrogen potassium difluoride
 Hydrogen potassium fluoride
 Potassium acid fluoride
 Potassium bifluoride
 Potassium hydrogen difluoride
 Potassium monohydrogen difluoride
- (41) (C.A.S. #1619-34-7) 3-Quinuclidinol
 1-Azabicyclo(2.2.2)octan-3-ol

- 3-Hydroxyquinuclidine
- (42) (C.A.S. #3731-38-2) 3-Quinuclidinone
1-Azabicyclo(2.2.2)octan-3-one
3-Oxyquinuclidine
Quinuclidone
- (43) (C.A.S.) #1333-83-1) Sodium bifluoride
Sodium hydrogen difluoride
Sodium hydrogen fluoride
- (44) (C.A.S. #143-33-9) Sodium cyanide
- (45) (C.A.S. #7681-49-4) Sodium fluoride
Sodium monofluoride
- (46) (C.A.S. #1313-82-2) Sodium sulfide
Disodium monosulfide
Disodium sulfide
Sodium monosulfide
Sodium sulfide
- (47) (C.A.S. #10025-67-9) Sulfur Monochloride
- (48) (C.A.S. #10545-99-0) Sulfur dichloride
- (49) (C.A.S. #111-48-8) Thiodiglycol
Bis(2-hydroxyethyl) sulfide
Bis(2-hydroxyethyl) thioether
Di(2-hydroxyethyl) sulfide
Diethanol sulfide
2,2'-Dithiobis-(ethanol)
3-Thiapentane-1,5-diol
2,2'-Thiobisethanol
2,2'-Thiodiethanol
Thiodiethylene glycol
2,2'-Thiodiglycol
- (50) C.A.S. #7719-09-7) Thionyl chloride
Sulfinyl chloride
Sulfinyl dichloride
Sulfur chloride oxide
Sulfur oxychloride
Sulfurous dichloride
Sulfurous oxychloride
Thionyl dichloride
- (51) (C.A.S. #102-71-6) Triethanolamine
- Alkanolamine 244
Nitrilotriethanol
2,2',2''-Nitrilotriethanol
2,2',2''-Nitrilotris(ethanol)
TEA
TEA(amino alcohol)
Tri(2-hydroxyethyl)amine
Triethanolamin
Tris(.beta.-hydroxyethyl)amine
Tris(2-hydroxyethyl)amine
Trolamine
- (52) (C.A.S. #637-39-8) Triethanolamine hydrochloride
- (53) (C.A.S. #122-52-1) Triethyl phosphite
Phosphorous acid triethyl ester
Triethoxyphosphine
Tris(ethoxy)phosphine
- (54) (C.A.S. #121-45-9) Trimethyl phosphite
Phosphorus acid trimethyl ester
Trimethoxyphosphine
- (I) Interpretation 12: Computers**
- (1) Digital computers or computer systems classified under ECCN 4A003.b or .c, that qualify for “No License Required” (NLR) must be evaluated on the basis of Adjusted Peak Performance (APP) alone, to the exclusion of all other technical parameters. Digital computers or computer systems classified under ECCN 4A003.b or .c that qualify for License Exception APP must be evaluated on the basis of APP, to the exclusion of all other technical parameters. Assemblies performing analog-to-digital conversions are evaluated under Category 3—Electronics, ECCN 3A002.h.
- (2) Related equipment classified under ECCN 4A003.g may be exported or reexported under License Exceptions GBS or CIV. When related equipment is exported or reexported as part of a computer system, NLR or License Exception APP is available for the computer system and the related equipment, as appropriate.

(m) Interpretation 13: Encryption commodities and software controlled for EI reasons

Encryption commodities and software controlled for EI reasons under ECCNs 5A002, 5A004 and 5D002 may be pre-loaded on a laptop, handheld device or other computer or equipment and exported under the tools of trade provision of License Exception TMP or the personal use exemption under License Exception BAG, subject to the terms and conditions of such License Exceptions. Neither License Exception TMP nor License Exception BAG contains a reporting requirement. Like other “information security” “software,” components, “electronic assemblies” or modules, the control status of encryption commodities and software is determined in Category 5 - Part 2 even if they are bundled, commingled or incorporated in a computer or other equipment. However, commodities and software specially designed for medical end use that incorporate an item in Category 5 - Part 2 are not controlled in Category 5 - Part 2. See paragraph (a) of Supplement No. 3 to part 774 (Statements of Understanding) of the EAR.

(n) Interpretation 14: Unfinished “600 series” commodities

Forgings, castings, and other unfinished products, such as extrusions and machined bodies, that have reached a stage in manufacturing where they are clearly identifiable by mechanical properties, material composition, geometry, or function as commodities controlled by any Product Group A (“End Items,” “Equipment,” “Accessories,” “Attachments,” “Parts,” “Components” and “Systems”) “600 series” ECCN are controlled in that “600 series” ECCN.

**§ 770.3 INTERPRETATIONS
RELATED TO EXPORTS OF
TECHNOLOGY AND SOFTWARE TO
DESTINATIONS IN COUNTRY
GROUP D:1**

(a) Introduction

This section is intended to provide you additional guidance on how to determine whether your technology or software would be eligible for a License Exception, may be exported under NLR, or require a license, for export to Country Group D:1.

(b) Scope of licenses

The export of technology and software under a license is authorized only to the extent specifically indicated on the face of the license. The only technology and software related to equipment exports that may be exported without a license is technology described in §§734.7 through 734.11 of the EAR; operating technology and software described in §740.13(a) of the EAR; sales technology described in §740.13(b) of the EAR; and software updates described in §740.13(c) of the EAR.

(c) Commingled technology and software

(1) U.S.-origin technology does not lose its U.S.-origin when it is redrawn, used, consulted, or otherwise commingled abroad in any respect with other technology of any other origin. Therefore, any subsequent or similar technical data prepared or engineered abroad for the design, construction, operation, or maintenance of any plant or equipment, or part thereof, which is based on or utilizes any U.S.-origin technology, is subject to the EAR in the same manner as the original U.S.-origin technology, including license requirements, unless the commingled technology is not subject to the EAR by reason of the *de minimis* exclusions described in §734.4 of the EAR.

(2) U.S.-origin software that is incorporated into or commingled with foreign-origin software does not lose its U.S.-origin. Such commingled software is subject to the EAR in the same manner as the original U.S.-origin software, including license requirements, unless the commingled software is not subject to the EAR by reason of the *de minimis* exclusions described in §734.4 of the EAR.

(d) Certain License Exception

The following questions and answers are intended to further clarify the scope of technology and software eligible for a License Exception.

(1)(i) Question 1.

(A) Our engineers, in installing or repairing equipment, use techniques (experience as well as proprietary knowledge of the internal componentry or specifications of the equipment) that exceed what is provided in the standard manuals or instructions (including training) given to the customer. In some cases, it is also a condition of the license that such information provided to the customer be constrained to the minimum necessary for normal installation, maintenance and operation situations.

(B) Can we send an engineer (with knowledge and experience) to the customer site to perform the installation or repair, under the provisions of License Exception TSU for operation technology and software described in §740.13(a) of the EAR, if it is understood that he is restricted by our normal business practices to performing the work without imparting the knowledge or technology to the customer personnel?

(ii) Answer 1. Export of technology includes release of U.S.-origin data in a foreign

country, and “release” includes “application to situations abroad of personal knowledge or technical experience acquired in the United States.” As the release of technology in the circumstances described here would exceed that permitted under the License Exception TSU for operation technology and software described in §740.13(a) of the EAR, a license would be required even though the technician could apply the data without disclosing it to the customer.

(2)(i) Question 2. We plan, according to our normal business practices, to train customer engineers to maintain equipment that we have exported under a license, License Exception, or NLR. The training is contractual in nature, provided for a fee, and is scheduled to take place in part in the customer's facility and in part in the U.S. Can we now proceed with this training at both locations under a License Exception?

(ii) Answer 2. (A) Provided that this is your normal training, and involves technology contained in your manuals and standard instructions for the exported equipment, and meets the other requirements of License Exception TSU for operation technology and software described in §740.13(a), the training may be provided within the limits of those provisions of License Exception TSU. The location of the training is not significant, as the export occurs at the time and place of the actual transfer or imparting of the technology to the customer's engineers.

(B) Any training beyond that covered under the provisions of License Exception TSU for operation technology and software described in §740.13(a), but specifically represented in your license application as required for this customer installation, and in fact authorized on the face of the license or a separate technology license, may not be undertaken while the license is suspended or revoked.