



U.S. Department
of Transportation

East Building, PHH – 32
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

**The US Department of Transportation
Competent Authority for the United States**

CLASSIFICATION OF EXPLOSIVES
EXPIRATION DATE:02-28-2015

Based upon a request by W.T. Bell International, Inc., 8811 Emmott, Houston, TX 77040, the following items are classed in accordance with Section 173.56, Title 49, Code of Federal Regulations (49 CFR). A copy of your application, all supporting documentation and a copy of this approval must be retained and made available to DOT upon request.

U.N. PROPER SHIPPING NAME AND NUMBER:

Articles, explosive, n.o.s., UN0349

U.N. CLASSIFICATION CODE: 1.4S

REFERENCE NUMBER

EX2009060062

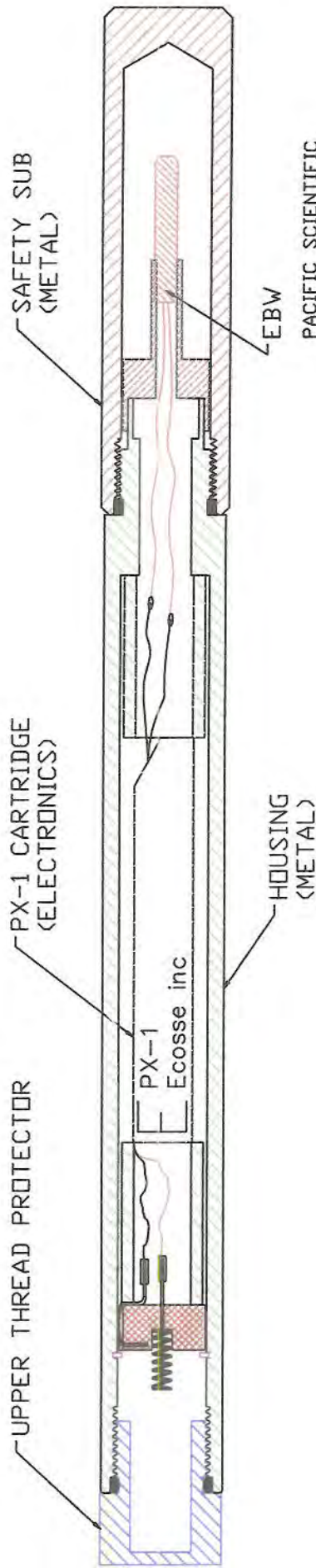
PRODUCT DESIGNATION/PART NUMBER

PXI-TC900 (Installed with Pacific Scientific EBW #2-300180) #PXI-TC900 (Installed with Teledyne RISI EBW #RP-830)

NOTES: This classification is only valid when the device has a threaded steel shipping cap installed over the output end containing the detonator. The following packaging method is assigned: Inner Packaging - Liners, double-wall fiberboard, installed in the outer packaging. Outer Packaging - UN 4G fiberboard box, each containing one article.

DATED: 03/22/2010

For Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety



PACIFIC SCIENTIFIC
 PART # 2-300180
 287 MG HNS/CLCP MIX
 (400°F RATED)

OR

TELEDYNE RISI
 PART # RP-830
 1.111 GM RDX
 (325°F RATED)

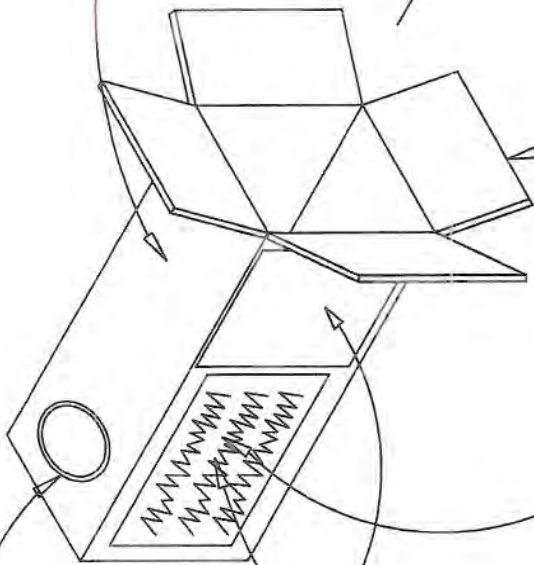
Overall length: 19.187"
 Outside Diameter: 1.500"

DO NOT SCALE DRAWING DIMENSIONS ARE IN INCHES 1/32" SURFACE FINISH ALL DIAMETERS CONCENTRIC TO .005 FRACTIONAL ±1/64 BREAK SHARP EDGES WITH 1/64" RADIUS	Date: SB Scale: NO UNLESS OTHERWISE SPECIFIED	Approved: 7/23/09 UNLESS OTHERWISE SPECIFIED	MATERIAL: HEAT TREAT:	NOMENCLATURE: ASSEMBLY OF PX-1 FIRING HEAD FOR TUBING CUTTERS
	LINEAR TOLERANCE .XX ±.02 .XXX ±.005	ANGULAR TOLERANCE ±1/2°	DRAWING NO. PX1-TC900	REV.

W. T. BELL INTERNATIONAL, INC.
 AN EXPLOSIVE SPECIALTY GROUP

POP CERTIFICATION

PRODUCT NO SCP005
 EX _____
 SLB NO. _____
 PART NO. _____
 LOT NO. _____
 GROSS WT.: _____ KGS.
 NET EXPL. WT. _____ KGS.
 DATE CODE: _____



CARDBOARD PADDING
 DOUBLE-WALL CORRUGATED
 1/4" THICK, (5,5,4,4) LAYERS THICK

PX-1 FIRING HEAD

SHIPPING CARTON
 4-3/8" x 4-3/8" x 23-1/2"
 275 LBS. TEST, 40H MICH. WAX COATED
 DOUBLE-WALL CORRUGATED

CARDBOARD PAD
 DOUBLE-WALL CORRUGATED
 2" THICK, TYP. BOTH ENDS

ATTENTION EXPLOSIVES HANDLE CAREFULLY
 ARTICLES, EXPLOSIVES UN 0349
 N.O.S. (CP/HNS) (400° TOOL)
 KEEP OUT OF REACH OF CHILDREN

OR

ATTENTION EXPLOSIVES HANDLE CAREFULLY
 ARTICLES, EXPLOSIVE UN 0349
 N.O.S. (RDX) (325° TOOL)
 KEEP OUT OF REACH OF CHILDREN

DO NOT SCALE DRAWING
 DIMENSIONS ARE IN INCHES
 1/25" SURFACE FINISH
 ALL DIAMETERS
 CONCENTRIC TO .006
 FRACTIONAL ±1/64
 BREAK SHARP EDGES
 WITH 1/64 RADIUS

SB	10/29/08
FULL	UNLESS OTHERWISE SPECIFIED
LINEAR TOLERANCE	.XX ±.02 .XXX ±.005
ANGULAR TOLERANCE	±1/2°

MATERIAL:
 HEAT TREAT:

W. T. BELL INTERNATIONAL, INC.
 AN EXPLOSIVE SPECIALTY GROUP

NUMERICALS:

OUTER PACKAGING
 FOR PX-1 FIRING HEAD

DRAWING NO.

PX-1_OP

REV.

WTB

W. T. Bell International, Inc.

2534 B FM 1375 East
Huntsville, TX 77340
Phone: (936) 344-2225
Fax: (936) 344-2122
wtbii@hughes.net

UN APPROVALS CERTIFICATE

UN PERFORMANCE ORIENTED PACKAGING PERIODIC RETEST

Certificate No. 007
Packaging ID: PX1 Firing Head
Reference Test Report No. 007
Dated: 06/25/2012

Periodic Retest of a
UN 4G Fiberboard Box
With Inner Packaging and Containing One (1) Explosive Device



4G/Y3.8/S/**

USA/+WT Bell Intl., Inc.

Certificate Expires: 06/25/2014

Tina Yates - Plant Supervisor
W. T. Bell International, Inc.



INERIS

NATIONAL INSTITUTE FOR INDUSTRIAL ENVIRONMENT AND RISK

- decree nr 90-1089, 7 December 1990 -

- order from the Minister of Industry, 20 December 1996 -

EXPLOSIVES FOR CIVIL USES

1 - EC TYPE-EXAMINATION CERTIFICATE

2 - **0080.EXP.10.0021**

3 - This certificate is relating to the following product:

ASSEMBLY OF PX-1 FIRING HEAD P/N PX1-TC900 or PX1-TC900HT

4 - This product is manufactured by:

W.T. BELL INTERNATIONAL, Inc.

8811 Emmott, Ste. 1900

HOUSTON, Texas 77040 (USA)

The applicant for the examination is:

ETUDES ET PRODUCTION SCHLUMBERGER (EPS)

1, rue Henri Becquerel

B.P. 202

92140 CLAMART (FRANCE)

5 - The above named product is specified in the enclosed appendix.

6 - The National Institute for Industrial Environment and Risk (INERIS), notified with the identification number 0080 in accordance with the article 6.2 of the Council Directive 93/15/EEC, 5 April 1993, testifies that:

The above named product model is recognized to conform to Essential Safety Requirements as defined in annex I of that Directive.

7 - In addition to the EC type-examination (module B) defined in annex II of the Directive, the applicant has retained the assessment of the production quality assurance (module D) defined in the same annex. In compliance with para 3.3 of module D, the decision for the assessment has been notified to the manufacturer.

Verneuil-en-Halatte, May 19, 2010

The Chief Executive Officer of INERIS

By delegation, the Certification Division, Manager

C. MICHOT



NATIONAL INSTITUTE FOR INDUSTRIAL ENVIRONMENT AND RISK

- decree nr 90-1089, 7 December 1990 -

- order from the Minister of Industry, 20 December 1996 -

Appendix to the EC type-examination certificate nr 0080.EXP.10.0021

A1 - PRODUCT NAME : ASSEMBLY OF PX-1 FIRING HEAD P/N PX1-TC900 or PX1-TC900HT

A2 - PRODUCT DESCRIPTION:

general identification:

- family : assembly
- sub-family : assembly of EBW detonator
- main explosive : EBW detonator Pacific Scientific (P/N 2-300180) or EBW detonator TELEDYNE RISI, Inc. RP-830 (P/N 188-7342)
- mass of explosive : 1.111 g of RDX or 0.287 g of mixture CP/HNS
- overall length : 48.73 cm (19.187")
- outside diameter : 3.81 cm (1.500")
- total mass : 2534.111 g or 2533.287 g
- manufacturer's references : PX1-TC900 or PX1-TC900HT

general conditions:

- shelf life : 5 years
- limit temperature for use : 163°C (325°F) for 1 hour (PX1-TC900 (RDX)) or 204°C (400°F) for 1 hour (PX1-TC900HT (CP/HNS))
- limit temperature for storage : -30°C / +60°C / 90 % RH max

A3 - DOCUMENTATION:

- | | reference | date |
|-----------------------------|--|-----------|
| - decision on certification | : DCE-10-113586-05671A,
PNEO/GBE-AgCE 5 | 5/19/2010 |

A4 - PARTICULAR CONDITIONS FOR USE:

As specified by the manufacturer for use in oil well industry.

A5 - MARKING:

- CE and symbol of Notified Body : in conformity with para 1 of module D in annex II of the Directive
- others : batch number, certificate nr

MATERIAL SAFETY DATA SHEET

W. T. BELL INTERNATIONAL, INC.

10-Dec-09

IDENTIFICATION	PART #: PX1-TC900HT	DESCRIPTION: PX-1 FIRING HEAD								
DESCRIPTION OF PRODUCT										
<p>An electronic bridge wire (EBW) detonator wired in series with an electronic capacitance cartridge, (PX-1 Fire set), housed in a metal housing.</p> <p>Note: CE approval for individual EBW Detonators and PX-1 fire set is attached.</p> <p>Constituents and weight of one firing head:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Metal Housing, Fire set, ect:</td> <td style="text-align: right;">2533 g</td> </tr> <tr> <td>Explosive - CP/HNS</td> <td style="text-align: right;">0.287 g</td> </tr> <tr> <td>TOTAL:</td> <td style="text-align: right;">2533.287 g</td> </tr> <tr> <td>Total weight of explosive material:</td> <td style="text-align: right;">0.287 g</td> </tr> </table>			Metal Housing, Fire set, ect:	2533 g	Explosive - CP/HNS	0.287 g	TOTAL:	2533.287 g	Total weight of explosive material:	0.287 g
Metal Housing, Fire set, ect:	2533 g									
Explosive - CP/HNS	0.287 g									
TOTAL:	2533.287 g									
Total weight of explosive material:	0.287 g									
PRINCIPLES OF FUNCTION										
<p>These firing heads are used to arm a tubing cutter which is used to sever downhole oilfield pipe. They provide a simple and safe way for the field to arm a tubing cuterr.</p>										
CLASSIFICATION FOR TRANSPORTATION										
UN No:	0349	Proper Shipping Name: Articles, Explosive, n.o.s.								
Shipping Specification:	4G/Y3.8/S/**									
Certificate number:	+4X5487									
DIVISION, HAZARD CLASS AND COMPATABILITY GROUP:		1.4S								
PACKAGING: 62.2 X 12.7 X 12.7 cm containing one PX-1 Firing Head. Inner packaging: 1 ea 139.7 x 59.4 cm corrugated double wall roll up tubular insert emcompassing: 2 ea 4.8 x 4.4 x 3.8 cm corrugated roll up spacer inserts.		WEIGHT								
		Net Weight of Product: 2.54 kg								
		Gross Weight of Product: 3.67 kg								
Net Weight of Explosive: 0.287 g										
TOXICITY: None										
EFFECTS OF ACCIDENTAL INITIATION IN PACKAGE										
<ul style="list-style-type: none"> - Danger of Explosion - Danger of Projections 										
PRECAUTIONS FOR STORAGE										
Temperature Range: -30°C / +60°C		Humidity Content: Max 90%								
SENSITIVITY		PRECAUTIONS IN CASE OF ACCIDENT								
Flashpoint Temperature:	N/A	-In case of major fire, DO NOT INTERVENE.								
100% Functioning Energy:	N/A	-MOVE AWAY AND KEEP AWAY as much as possible.								
0% Functioning Energy:	N/A	-TAKE SHELTER from the effects of the explosive blast,								
Electrostatic Discharge:	N/A	of direct projectiles and falling debris.								
Electromagnetic Field:	N/A	-If possible, MOVE packages that have not been affected								
Vibration:	N/A	AWAY from the area.								
Shock:	N/A	-STAY OUT OF THE DANGER ZONE when using a fire								
Drop:	N/A	hose								

MATERIAL SAFETY DATA SHEET

W. T. BELL INTERNATIONAL, INC.

10-Dec-09

IDENTIFICATION	PART #: PX1-TC900	DESCRIPTION: PX-1 FIRING HEAD
DESCRIPTION OF PRODUCT		
<p>An electronic bridge wire (EBW) detonator wired in series with an electronic capacitance cartridge, (PX-1 Fire set), housed in a metal housing.</p> <p>Note: CE approval for individual EBW Detonators and PX-1 fire set is attached.</p>		
Constituents and weight of one firing head:		
Metal Housing, Fire set, ect:	2533 g	
Explosive - RDX:	1.111 g	
TOTAL:	2534.111 g	
Total weight of explosive material:	1.111 g	
PRINCIPLES OF FUNCTION		
<p>These firing heads are used to arm a tubing cutter which is used to sever downhole oilfield pipe. They provide a simple and safe way for the field to arm a tubing cuterr.</p>		
CLASSIFICATION FOR TRANSPORTATION		
UN No:	0349	Proper Shipping Name: Articles, Explosive, n.o.s.
Shipping Specification:	4G/Y3.8/S/**	
Certificate number:	+4X5487	
DIVISION, HAZARD CLASS AND COMPATABILITY GROUP:		1.4S
PACKAGING: 62.2 X 12.7 X 12.7 cm containing one PX-1 Firing Head. Inner packaging: 1 ea 139.7 x 59.4 cm corrugated double wall roll up tubular insert encompassing: 2 ea 4.8 x 4.4 x 3.8 cm corrugated roll up spacer inserts.		WEIGHT
		Net Weight of Product: 2.54 kg
		Gross Weight of Product: 3.67 kg
		Net Weight of Explosiv 1.111 g
TOXICITY:	None	
EFFECTS OF ACCIDENTAL INITIATION IN PACKAGE		
<ul style="list-style-type: none"> - Danger of Explosion - Danger of Projections 		
PRECAUTIONS FOR STORAGE		
Temperature Range: -30°C / +60°C	Humidity Content: Max 90%	
SENSITIVITY	PRECAUTIONS IN CASE OF ACCIDENT	
Flashpoint Temperature:	N/A	-In case of major fire, DO NOT INTERVENE.
100% Functioning Energy:	N/A	-MOVE AWAY AND KEEP AWAY as much as possible.
0% Functioning Energy:	N/A	-TAKE SHELTER from the effects of the explosive blast, of direct projectiles and falling debris.
Electrostatic Discharge:	N/A	
Electromagnetic Field:	N/A	-If possible, MOVE packages that have not been affected AWAY from the area.
Vibration:	N/A	
Shock:	N/A	-STAY OUT OF THE DANGER ZONE when using a fire hose
Drop:	N/A	



UNITED STATES DEPARTMENT OF COMMERCE
BUREAU OF INDUSTRY AND SECURITY
WASHINGTON, D.C. 20230

CASE NUMBER: Z784243

TITAN SPECIALTIES, LTD.
ATTN: DON RHOADS
11785 HWY 152
PAMPA, TX 79065

August 18, 2010
G078963

BIS ISSUES THIS COMMODITY CLASSIFICATION DETERMINATION BASED UPON THE ASSUMPTION THAT THE APPLICANT HAS ALREADY DETERMINED THAT THE LISTED ITEM(S) ARE "SUBJECT TO THE EAR". AS DEFINED AND DESCRIBED IN SECTIONS 734.2 THROUGH 734.4 OF THE EAR, THE TERM "SUBJECT TO THE EAR" MEANS, AMONG OTHER THINGS, THAT THE ITEM(S) ARE NOT EXCLUSIVELY CONTROLLED FOR EXPORT OR REEXPORT BY ANOTHER AGENCY OF THE U.S. GOVERNMENT. SEE 15 C.F.R. 734.3(B)(1). THIS COMMODITY CLASSIFICATION DETERMINATION IS NOT A DETERMINATION BY BIS AS TO WHETHER THE LISTED ITEMS ARE "SUBJECT TO THE EAR". THUS, THIS DOCUMENT IS NOT AND MAY NOT BE RELIED UPON AS A U.S. GOVERNMENT DETERMINATION THAT THE ABOVE-LISTED ITEMS ARE NOT, FOR EXAMPLE, SUBJECT TO THE EXPORT CONTROL JURISDICTION OF THE INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR) (22 C.F.R. PARTS 120-130), WHICH ARE ADMINISTERED BY THE U.S. DEPARTMENT OF STATE.

THE FOLLOWING INFORMATION IS IN RESPONSE TO YOUR INQUIRY OF February 17, 2010 REQUESTING LICENSE INFORMATION FOR:

COMMODITY	ECCN	LVS	IVL REQUIRED FOR COUNTRY GROUP	LVS DOLLAR LIMIT
FIRING HEAD USED IN OIL AND GAS WELLS TO FIRE TUBING AND CASING CUTTERS. HEAVY METAL CASING CONTAINING ONE EXPLODING BRIDGEWIRE DETONATOR (1.11 GRAMS EXPLOSIVE WEIGHT, MAXIMUM) AND AN EXPLODING BRIDGEWIRE DETONATOR FIRESET. PX1-TC900	1A007B.2			\$

COMMENTS FROM LICENSING OFFICER(S):

ITEMS OTHERWISE ELIGIBLE FOR EXPORT OR REEXPORT UNDER A LICENSE EXCEPTION OR NLR (NO LICENSE REQUIRED) AND USED IN THE DESIGN, DEVELOPMENT, PRODUCTION OR USE OF NUCLEAR, CHEMICAL OR BIOLOGICAL WEAPONS OR MISSILES REQUIRE A LICENSE FOR EXPORT OR REEXPORT AS PROVIDED IN PART 744 OF THE EXPORT ADMINISTRATION REGULATIONS (EAR).



**UNITED STATES DEPARTMENT OF COMMERCE
BUREAU OF INDUSTRY AND SECURITY
WASHINGTON, D.C. 20230**

DESTINATIONS REQUIRING A LICENSE

SEE THE COMMERCE COUNTRY CHART (SUPPLEMENT NO. 1 TO PART 738 OF THE EAR) TO DETERMINE WHICH COUNTRIES REQUIRE A LICENSE. USE THE COUNTRY CHART COLUMN INFORMATION GIVEN ON THIS FORM IN CONJUNCTION WITH THE COUNTRY CHART TO DETERMINE THE LICENSING REQUIREMENTS FOR YOUR PARTICULAR ITEMS. FOR ITEMS CLASSIFIED EAR99, SEE PART 746 OF THE EAR TO DETERMINE THE LICENSING REQUIREMENTS.

APPLICATIONS FOR EXPORT MUST BE SUBMITTED ON FORM BIS-748P MULTIPURPOSE APPLICATION. THESE FORMS MAY BE OBTAINED BY CALLING (202) 482-3332 OR REQUESTING DIRECTLY ON THE BIS INTERNET WEB SITE. ASSISTANCE IN FILLING OUT THE FORM, OR ANY ASPECT OF EXPORTING, IS PROVIDED BY THE EXPORT COUNSELING DIVISION IN WASHINGTON, D.C. AT (202) 482-4811 OR THE WESTERN REGIONAL OFFICE IN NEWPORT BEACH, CALIFORNIA AT (714) 660-0144.

LICENSE EXCEPTIONS

BE AWARE THAT THE LICENSING REQUIREMENTS FOR SOME DESTINATIONS MAY BE OVERCOME BY ANY LICENSE EXCEPTION FOR WHICH YOUR ITEMS QUALIFY. SEE PART 740 OF EAR FOR INFORMATION ON LICENSE EXCEPTIONS. THE LICENSE AVAILABLE COLUMN ON THIS FORM LISTS ONLY THOSE LICENSE EXCEPTIONS OF THE SET GBS, CIV, CTP, TSR WHICH ARE APPLICABLE TO YOUR ITEMS. OTHER LICENSE EXCEPTIONS MAY APPLY, DEPENDING UPON THE CIRCUMSTANCES OF YOUR INTENDED TRANSACTION.

EXPORT CONTROL CLASSIFICATION NUMBERING SYSTEM (ECCN)

THE ECCN NUMBERING SYSTEM IS FOUND IN THE COMMERCE CONTROL LIST (CCL) PART 774 OF THE EAR. THE CCL IS A COMPREHENSIVE LIST THAT IDENTIFIES ALL ITEMS CONTROLLED AND LICENSED BY COMMERCE. WITHIN THE CCL, ENTRIES ARE IDENTIFIED BY AN ECCN. EACH ENTRY SPECIFIES THE LICENSE REQUIREMENTS FOR THE ITEM AND THE REASON(S) FOR CONTROL. PLEASE CONSULT PARTS 738 AND 774 OF THE EAR FOR SPECIFIC INFORMATION ON ECCNS.

SHIPPERS EXPORT DECLARATION (SED)

WHEN AN EXPORT IS MADE, IT IS NECESSARY FOR THE EXPORTER TO SHOW ON THE SHIPPERS EXPORT DECLARATION (FORM 7525-V) IN BLOCK 27 EITHER THE LICENSE NUMBER, THE APPLICABLE LICENS EXCEPTION SYMBOL OR THE SYMBOL NLR. FORM 7525-V IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE OF WASHINGTON, D.C. 20402, AND FROM EXPORT ADMINISTRATION DISTRICT OFFICES (U.S. DEPT. OF COMMERCE).

BRIAN BAKER

FOR INFORMATION CONCERNING
THIS CLASSIFICATION CONTACT
NAOMI FOSTER
PHONE #: 202-482-2954



UNITED STATES DEPARTMENT OF COMMERCE
BUREAU OF INDUSTRY AND SECURITY
WASHINGTON, D.C. 20230

DIVISION DIRECTOR

BIS/EA/STC/EL