

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 REGION 5

2008 MAR 12 PM 12:45

In the Matter of:	)	
	)	
BEHNKE LUBRICANTS, INC.	)	COMPLAINANT'S MOTION TO
MENOMONEE FALLS, WISCONSIN	)	SUPPLEMENT PREHEARING
	)	EXCHANGE
Respondent.	)	
	)	Docket No. FIFRA-05-2007-0025

**COMPLAINANT'S MOTION TO SUPPLEMENT PREHEARING EXCHANGE**

By this motion, Complainant, the United States Environmental Protection Agency, Region 5 (U.S. EPA or Complainant), moves to supplement its Prehearing Exchange pursuant to Sections 22.16(a) and 22.19(f) of the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits ("Consolidated Rules" or "CROP"), codified at 40 C.F.R. §§ 22.16(a) and 22.19(f). Complainant moves the Presiding Administrative Law Judge to allow Complainant to add the additional exhibits identified below to its Prehearing Exchange.

**Background**

On February 21, 2008, in connection with its Response to Complainant's Motion for Accelerated Decision ("Response"), Respondent filed, *inter alia*, declarations (and appended documents) from three witnesses who had not been identified in Respondent's prehearing exchanges, namely, William Barden of Badger Plastic & Supply, Inc.; Bill Bayliss of FMC Food Tech; and Tracey Huebner of Behnke. Complainant continues to object to Respondent's inclusion of and reliance on these declarations and the documents attached to them in the absence of a supplemental prehearing exchange.

Respondent also made the new argument that its lubricant products constituted “food,” and cited to statements that Behnke claims to have made to NSF International in support of that argument. *See Response*, at 10, 22-23.

Complainant is moving to supplement its Prehearing Exchange to add the following exhibits for possible use in cross examination of the three witnesses identified above:

- |       |   |
|-------|---|
| CX 69 | Badger Plastic & Supply, Inc. Brochure  |
| CX 70 | Print-outs of material from the website of Anheuser-Busch.                                  |
| CX 71 | Print-outs, advertisements and informational literature on FMC Food Tech.                   |
| CX 72 | NSF International, Registration Guidelines for Proprietary Substances and Nonfood Compounds |

*Complainant's Fourth Supplemental Prehearing Exchange* is being filed contemporaneously with this motion.

### **Governing Legal Standard**

The regulation governing supplementation of prehearing exchanges is found at 40 C.F.R. § 22.19(f), which provides as follows:

(f) Supplementing prior exchanges. A party who has made an information exchange under paragraph (a) of this section [22.19], ... shall promptly supplement or correct the exchange when the party learns that the information exchanged ... is incomplete, inaccurate or outdated, and the additional or corrective information has not otherwise been disclosed to the other party pursuant to this section.

In addition, the rules on the admission of evidence that govern administrative hearings under the Consolidated Rules of Practice allow for supplementation of prehearing exchanges at least fifteen days prior to the scheduled hearing, subject to the

discretion of the Presiding Administrative Law Judge. The rule at 40 C.F.R. § 22.22(a)(1) provides that “[t]he Presiding Officer shall admit all evidence which is not irrelevant, immaterial, unduly repetitious, unreliable, of little probative value, ... If, however, a party fails to provide any document, exhibit, witness name or summary of expected testimony required to be exchanged under § 22.19(a), (e) or (f) to all parties at least 15 days before the hearing date, the Presiding Officer shall not admit the document, exhibit or testimony into evidence, unless the non-exchanging party had good cause for failing to exchange the required information and provided the required information to all other parties as soon as it had control of the information, or had good cause for not doing so.” In essence, this regulation embodies a policy favoring the admission of all relevant and material evidence, and only prohibits the inclusion of such evidence if it has not been provided to all parties at least 15 days prior to the hearing.

In the case at bar, Complainant is supplying the additional evidence more than fifteen days prior to the hearing date of March 31, 2008. In addition, the evidence is being included in the prehearing exchange primarily to respond to new witness testimony or new arguments advanced by Respondent. If this Court ultimately rules that the testimony of any of Respondent’s three new witnesses (William Barden, Bill Bayliss and Tracey Huebner), or Respondent’s “food” arguments, are relevant and material to any issue in this case, Complainant may rely on the documents identified above during its examination of Respondent’s witnesses. Because Respondent has refused to provide much detail on the substance of these witnesses’ expected testimony (other than the terse declarations appended to Respondent’s brief), whether or not the exhibits identified above will prove to be relevant cannot be determined with certainty at this time.

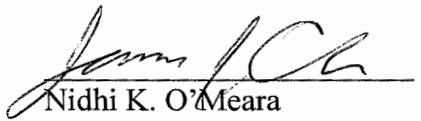
However, the documents were either obtained from the websites of the businesses of Respondent's witnesses, or from the publicly-available NSF International website, and relate to either the credibility of the witness or the legitimacy of Respondent's "food" arguments. CX 69, CX 70 and CX 71 may be relevant to evaluate the testimony of Respondent's witnesses, and CX 72 consists of guidelines of NSF International, which may be relevant to evaluate the testimony of Respondent's witnesses about the lubricant products at issue.

Inclusion of this evidence in the prehearing exchange will not unfairly prejudice Respondent. The documents in the exhibits identified above are easily accessible by Respondent, as they were either generated and made public by Respondent's own witnesses (or their employers), or consist of documents generated by NSF, an entity whom Respondent has invoked in connection with its defenses (see, e.g., Respondent's Exhibits 58 and 59). Finally, this supplement to the prehearing exchange is being filed and served nineteen (19) days prior to hearing, in accordance with 40 C.F.R. §§ 22.19(a) and 22.22(a).

### **Conclusion**

For all of the reasons set forth above, Complainant respectfully requests that this Honorable Court GRANT the instant *Complainant's Motion to Supplement Prehearing Exchange*.

Respectfully Submitted,

  
Nidhi K. O'Meara  
James J. Cha  
Erik H. Olson  
Associate Regional Counsels

3/12/08  
Date

RECEIVED  
REGIONAL HEARING CLERK  
US EPA REGION V

*In the Matter of Behnke Lubricants, Inc.*  
Docket No. FIFRA-05-2007-0025

2008 MAR 12 PM 12: 45

**CERTIFICATE OF SERVICE**

I hereby certify that the original and one true, accurate and complete copy of Complainant's Motion to Supplement Prehearing Exchange were filed with the Regional Hearing Clerk, U.S. EPA, Region 5, on the date indicated below, and that true, accurate and complete copies of Complainant's Motion to Supplemental Prehearing Exchange were served on the Honorable Barbara Gunning, Administrative Law Judge (service by Pouch Mail), and Mr. Bruce McIlroy, Esq., Counsel for Respondent Behnke Lubricants, Inc. (service by Federal Express), on the date indicated below:

Dated in Chicago, Illinois, this 12 day of March, 2008.

  
James J. Cha  
Associate Regional Counsel

RECEIVED  
REGIONAL HEARING CLERK  
US EPA REGION V

708 MAR 12 PM 12:45

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

In the Matter of: )  
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BEHNKE LUBRICANTS, INC. ) COMPLAINANT'S MOTION TO  
MENOMONEE FALLS, WISCONSIN ) SUPPLEMENT PREHEARING  
) EXCHANGE  
Respondent. )  
) Docket No. FIFRA-05-2007-0025

**COMPLAINANT'S FOURTH SUPPLEMENTAL PREHEARING EXCHANGE**

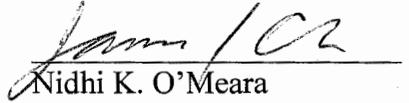
Complainant, the United States Environmental Protection Agency, Region 5 (U.S. EPA or Complainant), hereby files the instant *Complainant's Fourth Supplemental Prehearing Exchange* pursuant to Sections 22.16(a) and 22.19(f) of the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, Issuance of Compliance or Corrective Action Orders, and the Revocation, Termination or Suspension of Permits ("Consolidated Rules" or "CROP"), codified at 40 C.F.R. §§ 22.16(a) and 22.19(f).

**Additional Exhibits**

- CX 69      Badger Plastic & Supply, Inc. Brochure
- CX 70      Print-outs of material from the website of Anheuser-Busch.
- CX 71      Print-outs, advertisements and informational literature on FMC Food Tech.
- CX 72      NSF International, Registration Guidelines for Proprietary Substances and Nonfood Compounds

*Complainant's Fourth Supplemental Prehearing Exchange* is being filed contemporaneously with a corresponding motion to supplement the prehearing exchange.

Respectfully Submitted,

  
Nidhi K. O'Meara

James J. Cha  
Erik H. Olson  
Associate Regional Counsels  
U.S. EPA, Region 5

3/12/08  
Date

*In the Matter of Behnke Lubricants, Inc.*  
Docket No. FIFRA-05-2007-0025

2008 MAR 12 PM 12:

**CERTIFICATE OF SERVICE**

I hereby certify that the original and one true, accurate and complete copy of Complainant's Fourth Supplemental Prehearing Exchange were filed with the Regional Hearing Clerk, U.S. EPA, Region 5, on the date indicated below, and that true, accurate and complete copies of Complainant's Fourth Supplemental Prehearing Exchange were served on the Honorable Barbara Gunning, Administrative Law Judge (service by Pouch Mail), and Mr. Bruce McIlroy, Esq., Counsel for Respondent Behnke Lubricants, Inc. (service by Federal Express), on the date indicated below:

Dated in Chicago, Illinois, this 12 day of March, 2008.

  
James J. Cha  
Associate Regional Counsel

COMPLAINANT'S EXHIBIT 69

Badger Plastic & Supply, Inc. Brochure

# BPS

## Badger Plastic & Supply, Inc.

3451 Johnson Avenue P.O. Box 190 Plover, WI 54467  
715-345-0009 1-800-456-7228 FAX 715-345-0612

*Over 18 years of quality workmanship, custom innovative products combined with our knowledge and expertise has made Badger Plastic & Supply, Inc. a leader in the industry.*



### ***Serving Industry Throughout The Midwest***

- Established in 1984
- Full-line distribution of mechanical/industrial plastics
- Custom fabrication and machining
- Plastic welding and heat bending are our expertise
- Complete liner solutions – from planning to installation

***WE SELL PLASTICS - WE GIVE SERVICE***

## MATERIAL LISTING GUIDE

Acrylic	Teflon	Quicksilver
Polycarbonate	Agrathane	Sintra
PETG Sheet	Polypropylene	PEEK
Hi-Density Polyethylene (HDPE)	Phenolic	ABS
UHMW - Natural, Reprocessed, Filled	Urethane	PVDF (Kynar)
Nylon - Natural, MD, Oil-Filled	PVC	Polysulfone
Acetal - Delrin, Celcon	CPVC	Elastomers
Scotchply	Silicone (Thermoset)	Lexan
Ultem	Tivar 88	

## SPECIALTY PRODUCTS

Mirrored Acrylic	Roll Covers	Wear Strips
Vinyl Door Strip	Polyethylene Film	Equipment Guards
Fiberglass Grating/Decking	Can Cable	Casters & Wheels
Teflon Shrink Sleeves	Urethane Molded Products	Hose & Tubing
Teflon Tape, Fabric, Belts	Tanks - Polyethylene, Polypropylene	Lubricants
Gears	Tube Grease	Thordon
Sprockets	Ladders - Fiberglass, Aluminum	Conveyor Belting
Bearings	Safety Mirrors	Modular Plastic Belting
Bushings	Welding Curtains	Plastic Screw Conveyors

## LINERS

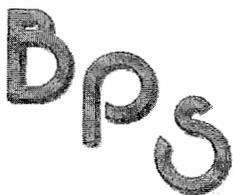
Trucks, Ships, Railroad Cars, Bins, Hoppers, Chutes

## SERVICES

Custom Machining & Fabrication  
Plastic Welding  
Heat Bending

Field Service & Installation  
Large Inventory  
Quick Turnaround

*Don't see what you're looking for? Please ask!*



**Badger Plastic & Supply, Inc.**  
**800-456-7228**



**Badger Plastic & Supply, Inc.**  
**800-456-7228**



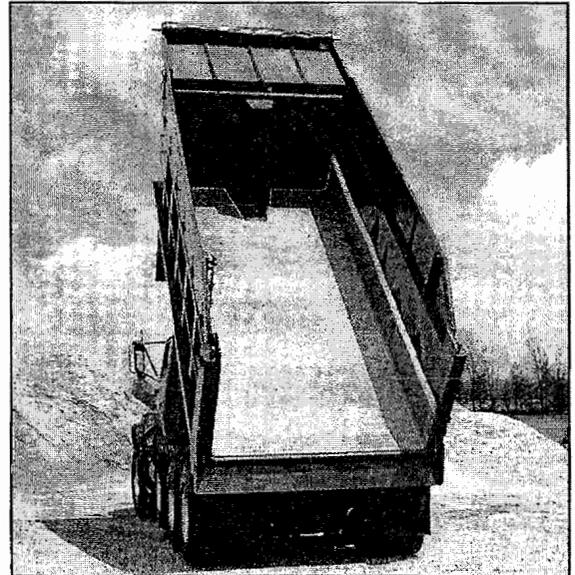
**Now Offering A Truck Liner  
 For Every Situation:**



**Ultra Heavy Duty - Including Asphalt**

**It handles hot asphalt up to 350°**

Proven over the last 10 years to outlast every other liner on the market today in the toughest situations.



**DURAPRO™ :**

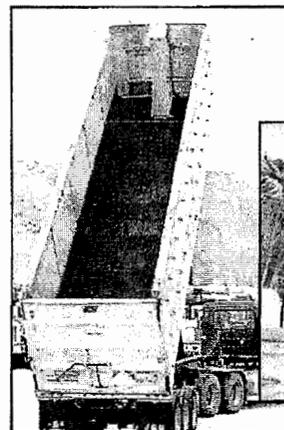
**Heavy Duty - No Asphalt**

An industrial strength reprocessed polymer liner designed to handle everything from coal to snow & clay to fly ash. 1/4" - 3/8" - 1/2" thick x 120" wide.

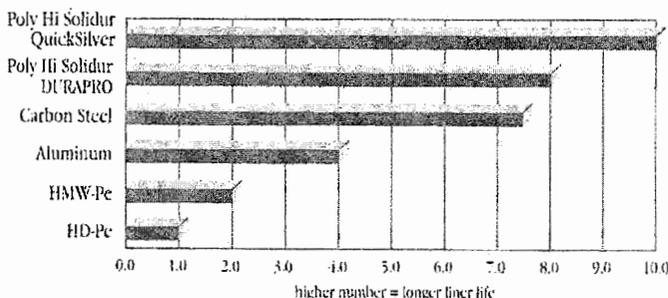
**BLACK ICE**

**Medium Duty - No Asphalt**

The inexpensive alternative to a sticky problem. Call us to discuss whether it's the right solution for you.



**Field Wear Performance**



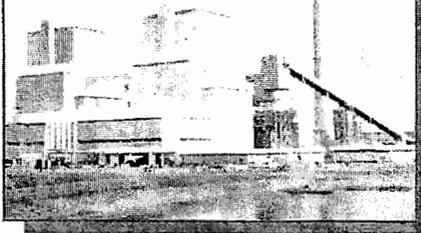
**Mobile Installation Available**

3451 Johnson Avenue P.O. Box 190 Plover, WI 54467  
 715-345-0009 1-800-456-7228 FAX 715-345-0612

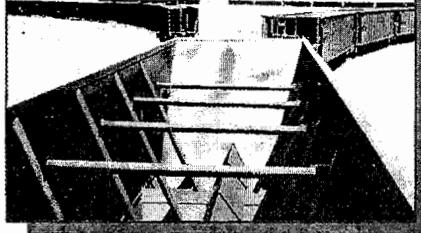
# SYSTEM TIVAR

TURNKEY SOLUTIONS

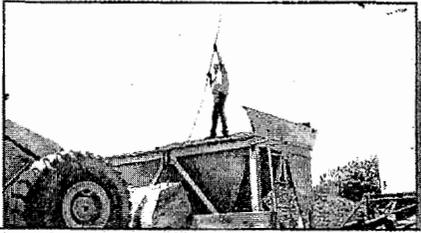
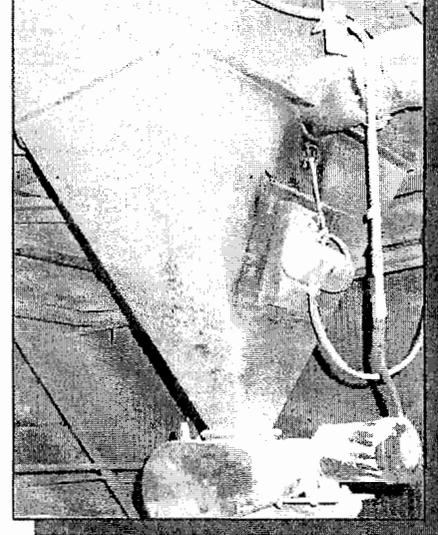
**POWER PLANTS**



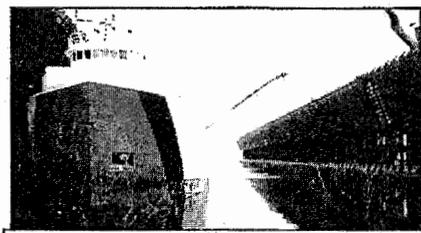
**RAILROAD CARS**



**FOUNDRY and COAL HOPPERS**



**MATERIAL HANDLING HOPPER**

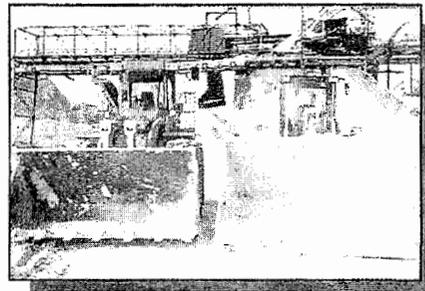


**SHIP, BARGES and LOADING DOCKS**

**OFF ROAD EQUIPMENT**



**LOADING EQUIPMENT**



## INDUSTRIES

- Power Plants
- Foundries
- Cement Plants
- Pulp & Paper
- Mining
- Rail
- Food Processing
- Landfills
- Asphalt Plants
- Shipping

**TIVAR® 88: The choice for bulk material handling**

## MATERIALS

- |         |            |                |
|---------|------------|----------------|
| -Coal   | -Fly Ash   | -Rock          |
| -Sand   | -Limestone | -Gypsum        |
| -Snow   | -Woodchips | -Dirt          |
| -Sludge | -Iron Ore  | -Food Products |

## APPLICATIONS

- Bunkers
- Hoppers
- Chutes
- Mixers
- Buckets
- Off Road Trucks
- Storage Bins
- Dust Collectors
- Silos
- Railcars

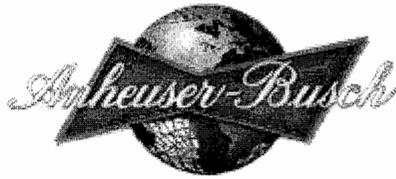
## Badger Plastic & Supply, Inc.

3451 Johnson Avenue P.O. Box 190 Plover, WI 54467  
715-345-0009 1-800-456-7228 FAX 715-345-0612



**COMPLAINANT'S EXHIBIT 70**

**Print-outs from Website of Anheuser-Busch.**



## WELCOME TO ANHEUSER-BUSCH COMPANIES

HOME COMPANY ENVIRONMENT BUSINESS UNITS BEER COMMUNITY

### Beer

Anheuser-Busch operates 12 breweries in the United States and brews more than 60 varieties of beer and alcohol beverages. Below is a brief description of each:

#### Budweiser Family



##### Budweiser

Brewed and sold since 1876, Budweiser leads the U.S. domestic premium beers combined.

 [Fact Sheet](#)



##### Bud Light

Introduced nationally in 1982, Bud Light is brewed using a combination of barley malts and rice. It contains more than 50% Budweiser, which gives the brew a distinctively clean taste.

 [Fact Sheet](#)



##### Budweiser Select

Bud Select is a new beer offering a bold taste with a smooth finish. Bud Select was developed using two-row and roasted specialty malts for drinkability and a taste that does not linger.

 [Fact Sheet](#)



##### Bud Dry

Introduced in 1989 Bud Dry is the first dry-brewed beer. It is brewed with select hops, grains and barley malt, which results in a smooth finish. Like all Anheuser-Busch beers, it is cold-filtered for a smooth finish and undergoes a special filtered finishing process to provide its unique taste.

 [Fact Sheet](#)



##### Bud Ice

Introduced in 1984, Bud Ice is a smooth-tasting ice beer with a sweet taste, with a smooth finish.

 [Fact Sheet](#)



##### Bud Ice Light

Bud Ice Light was introduced in 1994. Bud Ice Light contains 50% fewer calories.



 Fact Sheet

#### **Budweiser & Clamato Chelada**

#### **Bud Light & Clamato Chelada**

Originally introduced March 2007 in select California, Illinois, Colorado, Florida, Nebraska, North Carolina.

 Fact Sheet

#### **Michelob Family**



#### **Michelob**

Michelob is a malty and full-bodied lager with an eleg

 Fact Sheet



#### **Michelob Light**

Michelob Light is a full-flavored and rich-tasting light profile with surprisingly low calories and carbohydrates.

 Fact Sheet



#### **Michelob ULTRA**

Michelob ULTRA is brewed using the finest pale two-hops and a pure cultured yeast strain. The special ch process, produces a smooth, refreshing beer with few

 Fact Sheet



#### **Michelob ULTRA Amber**

Michelob ULTRA Amber features a beautifully rich, d taste that is also low in calories and carbohydrates.

 Fact Sheet



#### **Michelob ULTRA Fruit Infused**

Michelob ULTRA Fruit Infused beers are a line of light

 Fact Sheet



#### **Michelob Honey Lager**

Anheuser-Busch brewmasters combine two-row and hops, and a touch of honey to produce a full-bodied, this beer goes best with soups and sandwiches.

 Fact Sheet



#### **Michelob AmberBock**

Michelob AmberBock is American-style bock beer with a full-bodied, yet finishes cleanly. Anheuser-Busch introduced this beer in 1995. It is served with grilled, barbecued and German-style food.



 Fact Sheet

#### Michelob Golden Draft

Michelob Golden Draft was introduced in 1991 and d packaging feature exclusive faceted edges.

 Fact Sheet



#### Michelob Golden Draft Light

Michelob Golden Draft Light also made its debut in 1 clear-bottle, packaged-draft market.

 Fact Sheet

#### Imports



#### Bass Pale Ale

Bass is a full-flavored ale that is still brewed accordin and water rich in essential salts and minerals combin quality, full-bodied flavor.

 Fact Sheet



#### Beck's

Brewed in Bremen, Germany, Beck's is made in acco Law of 1516. It is brewed using only top-grade barley region, fresh glacier water and Beck's exclusive strai generations.

 Fact Sheet



#### Beck's Dark

A rich and surprisingly smooth beer, Beck's Dark fea copper color is the result of specially roasting the bar fermented lager which creates a robust flavor and ful lager beer.

 Fact Sheet



#### Beck's Oktoberfest

A classic German pilsner with a sweet, full-bodied ta

 Fact Sheet



#### Beck's Premier Light

A crisp, refreshing flavor uncommon in a light beer. L Light features a slightly fruity but firm crispness and e

 Fact Sheet

#### Boddingtons Pub Ale

Renowned for its golden color, distinctive creamy hea Boddingtons is a medium-bodied pale ale. It has a cr clean, pleasant aftertaste.



 Fact Sheet



#### Czechvar

Czechvar is brewed over a 90-day lagering period using hops, Moravian malt and soft Artesian well water. Czechvar is brewed in Ceske Budejovice, Czech Republic, for export to the United States.

 Fact Sheet



#### Grolsch

Sold in more than 60 countries around the world, Grolsch is the #1 premium import in the United States. Grolsch is brewed using a bottom fermentation process and a combination of top and bottom head and a smooth and full-bodied taste.

 Fact Sheet



#### Grolsch Amber Ale

Grolsch Amber Ale is a top fermented ale with a pure malt character complemented by notes of dried fruit to create a perfect balance.

 Fact Sheet



#### Grolsch Blonde Lager

Grolsch Blonde Lager has a uniquely smooth taste, crisp and refreshing.

 Fact Sheet



#### Grolsch Light Lager

Grolsch Light Lager has a classic pilsner character with a touch of citrus fruit sweetness and balancing hop bitterness.

 Fact Sheet



#### Harbin Lager

Harbin Lager is brewed with a blend of select traditional malt and the finest of malt. Harbin Lager is brewed at the Harbin Brewery in Wuhan, China.

 Fact Sheet



#### Hoegaarden

The key to Hoegaarden's unique, refreshing flavor is the use of coriander.

 Fact Sheet

**Kirin Ichiban**

Imported from Japan, Kirin Ichiban has a smooth, full

 Fact Sheet

**Kirin Light**

Imported from Japan, Kirin Light has an enticing hop

 Fact Sheet

**Leffe Blonde**

A dry, fruity and lightly spiced Belgian Abbey Ale, Leffe subtly. The bitterness is delicate, extending over th

 Fact Sheet

**Leffe Brown**

Leffe Brown is substantially more robust than Leffe B balanced by the brown sugar sweetness of the roast melting caramel.

 Fact Sheet

**Lowenbrau Original Lager**

Quite clean with a faint herbal hop aroma, Lowenbrau sweetness.

 Fact Sheet

**Staropramen Pilsner**

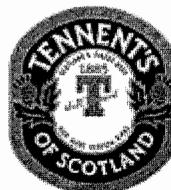
Sweet and citrus-like with some strong lemon notes, an impressive white puffy head. It finishes with a stro

 Fact Sheet

**Stella Artois**

Stella Artois is brewed using only the finest natural in grains and Stella Artois' unique yeast strain – a much years.

 Fact Sheet

**Tennent's Lager**

Straw colored and well-balanced, Tennent's is a very with a tangy hoppiness to create a crisp, refreshing c

 Fact Sheet

**Tiger Beer**

Tiger Beer has long been the No. 1 brand in Singapo



leading brands in Vietnam and Cambodia and the No. 1 beer in Ireland. Tiger Beer is a full-flavored beer with a crisp,

 **Fact Sheet**

#### Specialty Beers



#### Redbridge

Redbridge is a rich, hearty and full-bodied lager brew with a clean aroma, a sweet toasted grain flavor and a well-balanced

 **Fact Sheet**



#### Ray Hill's American Pilsner

Ray Hill's American Pilsner is a classic American pilsner with a clean bodied taste and a clean finish and features a deep golden color. The Beer Co. is a joint venture between Hill Brewing Co. and Anheuser-Busch produces and distributes the beer, and is the brand.

 **Fact Sheet**



#### Rolling Rock

Anheuser-Busch acquired the Rolling Rock brand in 1996. The malt character that lends to its distinctive taste and smooth

 **Fact Sheet**



#### Bud Extra

Bud Extra takes beer to the next level - combining the flavors of ginseng and guarana, Bud Extra is a beer with some unique aromas of blackberry, raspberry and cherry, Bud Extra is a factor in the finish.

 **Fact Sheet**



#### Bare Knuckle Stout

Brewed using the finest ingredients including a blend of malted barley, Bare Knuckle Stout is also balanced with domestic hopping and a thick head.

 **Fact Sheet**



#### Sun Dog Amber Wheat

Anheuser-Busch Brewmasters share their newest recipe with you. Sun Dog complements warm weather for a limited time.

 **Fact Sheet**

#### ZiegenBock

An easy-drinking bock beer, available only in Texas,



 [Fact Sheet](#)



#### ZiegenBock Amber

An authentic Texas-style specialty light beer with a rich Texas, since 2003.

#### Regional Beers



#### SkipJack Amber

Skipjack Amber is a smooth, medium-bodied beer ch

 [Fact Sheet](#)



#### Ascent 54

Ascent 54 is an unfiltered beer with a complex taste of specialty malts and unique spicy aromas. Brewed Ascent 54 is available to beer lovers in Colorado.

 [Fact Sheet](#)



#### Mule Kick Oatmeal Stout

Mule Kick Oatmeal Stout is a medium-bodied, oatmeal a double-heeled "kick" of roasted coffee and oatmeal Kick Oatmeal Stout is available to beer lovers in Miss

 [Fact Sheet](#)



#### Demon's Hop Yard IPA

Demon's Hop Yard IPA is a "hopped-up" and fruity all Anheuser-Busch's Merrimack, N.H., brewery, Demor New England.

 [Fact Sheet](#)



#### Tarpon Spoon

Tarpon Spoon is a deliciously refreshing all-malt Boh flavors, which are balanced by its complex blend of s Anheuser-Busch's Jacksonville, Fla., brewery, Tarpo

 [Fact Sheet](#)

#### Busch Family



#### Busch

Introduced in 1955, Busch has a smooth, light taste. priced beer in all major demographics.

 [Fact Sheet](#)

#### Busch Light



Introduced in 1989, Busch Light is already the 8th be

Fact Sheet



**Busch Ice**

In 1995, Anheuser-Busch introduced this smooth-tas subpremium-priced product.

Fact Sheet

**Natural Family**



**Natural Light**

Naturally brewed and less filling, low-calorie Natural l

Fact Sheet



**Natural Ice**

Natural Ice - Anheuser-Busch introduced Natural Ice This subpremium-priced ice beer, 5.9 percent alcoho

Fact Sheet

**Malt Liquors**



**Hurricane High Gravity**

Hurricane High Gravity offers a very full-bodied flavoi

Fact Sheet



**Hurricane Malt Liquor**

This full-bodied, robust, slightly sweet-tasting malt liq select test markets in 1996.

Fact Sheet



**Hurricane Ice**

"Ice-brewed" with a combination of malts and cereal and body; introduced in 1997 and available only in th

Fact Sheet



**King Cobra**

A naturally brewed, full-bodied malt liquor, King Cobr

Fact Sheet

**Seasonal Beers**

**Michelob Porter**

Slightly bitter malty brew, with pronounced caramel a



 [Fact Sheet](#)



**Michelob Specialty Sampler Collection**

The Michelob Specialty Sampler Collection features 10 beers brewed by Busch's team of expert brewmasters. This year's collection includes Michelob Marzen, Michelob Pale Ale and Michelob Pilsener.

 [Fact Sheet](#)



**Winter's Bourbon Cask Ale**

Winter's Bourbon Cask Ale is brewed with dark roast imported Hallertau and Alsace hops. It is then aged in oak barrels with vanilla beans.

 [Fact Sheet](#)

**Specialty Malt Beverages**



**BACARDI SILVER Pomegranate Mojito**

BACARDI SILVER Pomegranate Mojito is a pomegranate-flavored mojito and the first nationally available, pomegranate Mojito.

 [Fact Sheet](#)



**BACARDI SILVER Mojito**

BACARDI SILVER Mojito maintains the classic, refreshing flavor in a convenient, portable package – perfect for entertaining.

 [Fact Sheet](#)



**BACARDI SILVER Peach**

BACARDI SILVER Peach is brewed with select two-row malt and peach to create a less sweet-tasting but more refreshing flavor. It is the only malt beverage available nationally.

 [Fact Sheet](#)



**BACARDI SILVER Watermelon**

BACARDI SILVER Watermelon has the subtle, juicy flavor of watermelon.

 [Fact Sheet](#)



**BACARDI SILVER Raz**

BACARDI SILVER Raz has a refreshingly clean and crisp flavor.

 [Fact Sheet](#)

**BACARDI SILVER O3**

BACARDI SILVER O3 offers a blend of exotic orange and lime flavors.



valencia and tangerine, and resulting in a crisp, refreshing, spirit-branded flavored malt beverage.

 **Fact Sheet**



#### **BACARDI SILVER Strawberry**

The natural flavor of early-season strawberries is combined with the crisp, refreshing, spirit-branded flavored malt beverage of BACARDI SILVER Strawberry.

 **Fact Sheet**



#### **BACARDI SILVER**

BACARDI SILVER is a clear malt beverage made with a blend of malted barley and wheat, resulting in a crisp, refreshing taste.

 **Fact Sheet**



#### **Tequila**

The nationwide rollout of Tequila in 1999 was one of the most successful introductions ever. Tequila is the first American-made agave nectar and a natural flavor of lime and real Me.

 **Fact Sheet**



#### **TILT**

TILT is a lightly carbonated and well-balanced malt beverage. Brewed with two-row malt, natural grains, hops, yeast, caffeine, guarana, and ginseng.

 **Fact Sheet**



#### **TILT 8.0%**

TILT 8.0% is the perfect balance of tart and sweet. It has a bright green color. Brewed with select barley malt, it is infused with lemon-lime flavor, caffeine, guarana and ginseng.

 **Fact Sheet**

#### **Specialty Organic Beers**



#### **Stone Mill Pale Ale**

Stone Mill Pale Ale is an organic beer with the perfect classic pale ale with a fruity aroma.

 **Fact Sheet**



#### **Wild Hop Lager**

Wild Hop Lager is an organic, European-style lager. It has a smooth taste with a hint of caramel sweetness.

 **Fact Sheet**

#### **Alliance Partner Products**



**Redhook Ale**

As part of an equity investment in the Redhook Ale B distributed Redhook's superior microbrewery product Redhook Extra Special Bitter (ESB) Ale, Ballard Bitte others.



**Widmer Brothers**

Anheuser-Busch expanded its participation in the mic agreement with Widmer Brothers Brewing of Portlan alliance allows Anheuser-Busch to expand its particip providing Anheuser-Busch wholesalers with a unique



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## Budweiser

### “The Great American Lager”

<b>Introduced:</b>	1876
<b>Beer Category/Style:</b>	Premium Regular – American-style lager.
<b>Taste Profile:</b>	Fresh and subtle fruit notes, a delicate malt sweetness and balanced bitterness for a clean, snappy finish. <b>Budweiser</b> is a medium-bodied, flavorful, crisp and pure beer with blended layers of premium American and European hop aromas, brewed for the perfect balance of flavor and refreshment.
<b>Ingredients/Brewing:</b>	Brewed using a blend of imported and classic American aroma hops, and a blend of barley malts and rice. <b>Budweiser</b> is brewed with time-honored methods including “ <i>kraeusening</i> ” for natural carbonation and Beechwood aging, which results in unparalleled balance and character.
<b>Advertising Highlights:</b>	<b>Budweiser</b> was advertised with spectacular, electric billboards in New York City’s Times Square as early as 1902, and was the first brand to sponsor a network TV show (“The Ken Murray Variety Show” on CBS in 1951). More recently, the brand has created advertising icons like Frank and Louie, the <b>Budweiser</b> lizards, and the “Whassup!” guys, a campaign that won the Grand Prix award in 2001 at the 48 <sup>th</sup> Annual International Advertising Festival in Cannes, France. The brand also highlights the world-famous <b>Budweiser</b> Clydesdales in its advertising.
<b>Sponsorship Highlights:</b>	<b>Budweiser</b> has been an Olympic supporter since 1984, is currently the “Official International Beer” sponsor of the Beijing 2008 Olympic Games, and is the “Official Beer” of the 2010 FIFA World Cup in South Africa.  Other sports sponsorships include Major League Baseball (including 26 domestic teams), 28 National Football League teams, Major League Soccer, the Ryder Cup, the National Hot Rod Association (NHRA), the U.S. and Mexican National Soccer Teams and major boxing events. The brand also sponsors driver Kasey Kahne on the NASCAR Sprint Cup Series and Brandon Bernstein on the NHRA POWERade Top Fuel Series.

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**Community Highlights:**

**Budweiser** family promotions have raised millions of dollars for community and charitable causes. Habitat for Humanity, the Muscular Dystrophy Association, Big Brothers Big Sisters, Susan G. Komen Foundation, Paralyzed Veterans of America, America Supports You and the Hispanic Scholarship Foundation are just a few of the causes that have benefited. Additionally, the "Help Budweiser Help the Outdoors" program has raised more than \$8 million over the past seven years for wildlife and habitat conservation efforts.

**Interesting Facts:**

**Budweiser** was introduced in 1876 when company founder Adolphus Busch set out to create the United States' first truly national beer brand – brewed to be universally popular and transcend regional tastes.

Each batch of **Budweiser** follows the same family recipe used by five generations of Busch family brewmasters.

Samples of **Budweiser** are flown into St. Louis everyday from each of A-B's 12 regional breweries. There, in a special tasting room, the beer is sampled and judged by our brewmasters to ensure its quality and consistency.

**Further Information:**

Visit [www.budweiser.com](http://www.budweiser.com) or [www.anheuser-busch.com](http://www.anheuser-busch.com).

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## Bud Light "Keeps It Coming"

<b>Introduced:</b>	1982
<b>Beer Category/Style:</b>	Premium Light – American-style light lager.
<b>Taste Profile:</b>	Light-bodied brew with a fresh, clean and subtle hop aroma, delicate malt sweetness and crisp finish for ultimate refreshment.
<b>Ingredients/Brewing:</b>	<b>Bud Light</b> is brewed using a blend of premium aroma hop varieties, both American-grown and imported, and a combination of barley malts and rice. Its clean, crisp and refreshing flavor makes it the world's favorite light beer.
<b>Advertising Highlights:</b>	<p><b>Bud Light's</b> most recent campaign titled "Keeps It Coming" is an evolution of the brand's longstanding successful strategy of using humor to show <b>Bud Light's</b> popularity with beer drinkers. This campaign reinforces the neverending refreshment and superior drinkability enjoyed by <b>Bud Light</b> consumers. This tagline is currently featured on all <b>Bud Light</b> TV, radio, print and billboard advertising.</p> <p><b>Bud Light's</b> humorous "Real Men of Genius" campaign has earned more than 100 advertising awards since it was launched in 2000. Most recently, it captured the world's most prestigious advertising award – the 2006 Grand Prix for Radio at the 53rd Annual International Advertising Festival in Cannes, France.</p> <p><b>Bud Light</b> Super Bowl commercials have also enjoyed tremendous success. This year, <b>Bud Light's</b> Super Bowl ads captured four of the top-20 spots in USA Today's "Ad Meter," which is recognized as the top Super Bowl advertising consumer poll in the world. The brand has also created memorable campaigns such as "I Love You, Man," and "Yes, I Am."</p>

**Sponsorship Highlights:**

**Bud Light** is currently a sponsor of Major League Baseball, the National Basketball Association, the National Hockey League and a number of domestic teams within each league. Other sports sponsorships include 28 National Football League teams, the Association of Volleyball Professionals, Major League Lacrosse, Aspen Ski Company, USA Snowboarding, professional surfers Serena Brooke and Fred Patacchia, seven-time world champion Bud Light/Dave Scott Offshore Powerboat Race Team and the St. Louis Grand Prix boat race.

**Bud Light** also sponsors an annual USARPS Rock Paper Scissors League to find the top Rock Paper Scissors player in the country. This includes hosting nationwide tournaments and the national finals in Las Vegas, where the champion walks away with a grand prize of \$50,000.

**Community Highlights:**

Budweiser family promotions have raised millions of dollars for community and charitable causes. Habitat for Humanity, the Muscular Dystrophy Association, Big Brothers Big Sisters, the Susan G. Komen Foundation, Paralyzed Veterans and the Hispanic Scholarship Foundation are just a few of the causes that have benefited.

**Interesting Facts:**

**Bud Light** is the world's best-selling beer. Its share of the premium-light segment is 53 percent (more than the combined share of the next two premium-light brands) and its volume has grown more than any other Top 10 beer brand. Additionally, since 1997, **Bud Light** has grown market share among adults across virtually every age, gender and demographic group.

**Further Information:**

Visit [www.budlight.com](http://www.budlight.com) or [www.anheuser-busch.com](http://www.anheuser-busch.com).

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## Budweiser Select

### “Exceptional Taste That’s Never Filling – Step Up To Select”

<b>Introduced:</b>	2005
<b>Beer Category/Style:</b>	Hybrid Premium Regular/Premium Light – American-style lager.
<b>Taste Profile:</b>	A distinctive and sophisticated full-flavored beer with fine hop aroma, bold caramel malt flavor and a refreshingly clean finish.
<b>Ingredients/Brewing:</b>	Brewed with two-row and roasted caramel malt for a rich color, and a blend of hand-selected premium American and Bavarian hops for balance and flavor. <b>Budweiser Select</b> spends approximately twice as long as regular beers in the brewhouse, which results in lower carbohydrate and calorie content after fermentation.
<b>Advertising Highlights:</b>	<p><b>Budweiser Select’s</b> advertising often features stylish lifestyle settings to elevate consumers’ awareness and understanding of the brand’s attributes and how the beer fits into contemporary lifestyles. The brand’s advertising has also featured celebrities including hip hop artist and entrepreneur Jay-Z, renowned football coach Don Shula and basketball legend Magic Johnson, to name a few.</p> <p>In 2006 <b>Budweiser Select</b> launched Crowntown, a digital/viral “webisode” campaign that brings the brand’s crown icon to life through the creation of characters living the “hip” city life.</p>
<b>Sponsorship Highlights:</b>	<p><b>Budweiser Select</b> sponsors Flavorpill, a cultural, film, arts and music influence website for sophisticated adults and Pandora.com, a Web site that allows users to set up a free, customized radio station by artist or music genre. The brand also sponsors the seven-time world champion Budweiser Select/Dave Scott Offshore Powerboat Race Team. Additional sponsorships include Fashion Week events and New York’s Tribeca Film festival.</p>
<b>Interesting Facts:</b>	<p><b>Budweiser Select</b> contains only 99 calories and 3.1 grams of carbohydrates per 12-ounce serving, which is favorable when compared with traditional premium regular/premium light lagers.</p> <p>In 2006 <b>Budweiser Select</b> appointed entrepreneur Jay-Z as co-brand director to collaborate on marketing initiatives for the brand.</p>
<b>Further Information:</b>	Visit <a href="http://www.budweiserselect.com">www.budweiserselect.com</a> or <a href="http://www.anheuser-busch.com">www.anheuser-busch.com</a> .

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## Michelob/Michelob Light “Reward Yourself”

- Introduced:** **Michelob:** 1896  
**Michelob Light:** 1978
- Beer Category/Styles:** High End – European-style premium lager and European-style, low-carbohydrate light lager.
- Taste Profiles:** **Michelob** is a malty and full-bodied lager with an elegant European hop profile. **Michelob Light** is a full-flavored and rich-tasting light lager offering a malty sweetness and aromatic hop profile with surprisingly low calories and carbohydrate content. Both beers are brewed traditionally for full, distinctive and classic character.
- Ingredients/Brewing:** **Michelob** and **Michelob Light** are brewed with 100 percent malt, a blend of two-row and caramel malts, and are balanced with European noble aroma hop varieties from the Hallertau and Tettnang regions. **Michelob** and **Michelob Light** are traditionally brewed, fermented and aged with our classic lager yeast strain and cold matured for balanced crispness.
- Interesting Facts:** **Michelob** was created more than a century ago to be the “draught beer for connoisseurs.” For 66 years, it was distributed only as a draught product, and only to the finest retail outlets. In 1961, it was introduced in a bottle that became a legend within its own right, with its unusual hourglass shape and gold foil shrouded neck. **Michelob** became available in cans in 1967.
- Further Information:** Visit [www.michelob.com](http://www.michelob.com) or [www.anheuser-busch.com](http://www.anheuser-busch.com)

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## Bass Pale Ale

- Introduced/Availability:** 1777; available nationwide.
- Beer Category/Style:** High-End European Import; English Pale Ale
- Taste Profile:** **Bass** is a full-flavored ale that is still brewed according to its original recipe. English malts, aromatic hops and water rich in essential salts and minerals combine to give **Bass** its slight burnt roast aroma and high-quality, full-bodied flavor.
- Ingredients/Brewing:** **Bass** is brewed with two strains of yeast to produce a complex, nutty, malty taste with subtle hop undertones and a beautiful chestnut hue. **Bass** is 5.1 percent alcohol by volume (ABV).
- Packaging:** **Bass** is available on draught, in 12-ounce bottles, 16-ounce cans and a 19.25-ounce single-serve bottle.
- How to Serve:** Try pairing **Bass** with smoky poultry dishes and pasta. The beer should always be served in its special tri-glass to enhance the flavor and presentation. Enjoy **Bass** alone or as part of an authentic Black & Tan – **Bass** Pale Ale in its signature tri-glass, layered with a stout beer.
- Interesting Facts:** The original English Pale Ale and England's first trademark, **Bass** has been embraced by trail-blazers since 1777. The brand has been painted by Manet, fought over by Napoleon and was served on the Titanic.
- Bass** is imported and distributed in the United States by Anheuser-Busch, Inc.
- Further Information:** Visit [www.bass.com](http://www.bass.com)

###

**COMPLAINANT'S EXHIBIT 71**

**Print-outs, advertisements and informational  
literature on FMC Food Tech.**

[Print](#)   [Close](#)

## FMC FoodTech

FMC FoodTech is a leading supplier of integrated food processing solutions. From single machines to complete processing lines, we enhance value and capture quality, nutrition and taste in food products.

As a local presence on six continents, we can quickly provide customers and partners in the food processing industry with know-how, service and support that ensures their profitable enterprise.

### Read About Key FMC FoodTech Innovations



#### **Sharing Knowledge - FMC Applications & Technologies**

The FMC FoodTech experts spend a great deal of time and energy making sure our technologies are leading edge for the benefit of our customers.



#### **Raising the Bar on Frying Technology**

Using thermal fluid as the heat source and a patented heat exchanger in the fryer, the THERMoFIN Fryer provides processors with a high capacity system for even the most difficult to handle products.

### More Links

#### **Where can you go to test-run specific technologies, refine applications or experiment with new ones?**

Explore FMC FoodTech's Food Processing and Technology Centers

#### **PPM Technologies**

PPM Technologies is one of the world's top suppliers for the global food processing and packaging industry

#### **Online Parts Ordering ([myfmcfoodtech.com](http://myfmcfoodtech.com))**

Buy spare parts for your existing equipment

#### **SuperAgi™ Automated Batch Retort**

Multi-process retort with Steam Water Spray™ and water immersion

#### **Product Catalog**

See a listing of equipment FMC FoodTech offers

#### **Welcome to FoodTech**

A message from Charlie Cannon, Group Manager - FMC FoodTech

**Print   Close**

## **Lubricants**

FMC FoodTech has used extensive research and testing to improve upon lubricants currently used.

FMC FoodTech offers a variety of lubricants for freezers, fillers and closers, sterilizers, and more.

Please click links in the gray box below to read more.

Print Close

## Freezer Lubricants

### EUROPE

The following types of lubrications are available for FMC FoodTech Freezing Equipment in Europe.

(Click on images, or right-click and choose "Save Target.")

#### **Frigoscandia Lube Formula 410 Phylax™** (PDF, 112kb)

Make food safety part of your lubrication routine.



#### **Frigoscandia Lube Formula 410 R™** (PDF, 133kb)

Secure lubrication when processing food product.



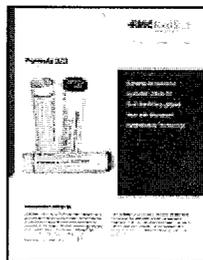
### NORTH AMERICA

The following types of lubrications are available for FMC FoodTech Freezing equipment.

(Click on images, or right-click and choose "Save Target.")

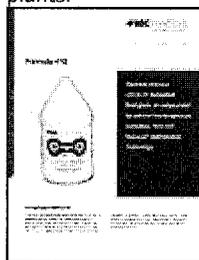
#### **Frigoscandia Lube Formula 322** (PDF, 224kb)

Developed to satisfy the extreme-temperature conditions found in several areas of modern food processing.



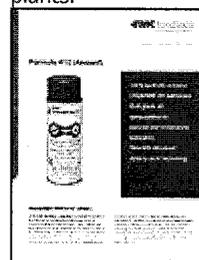
#### **Frigoscandia Lube Formula 410** (PDF, 252kb)

Food-grade lubricant is compounded specifically to provide oil lubrication in the extreme cold environments found in food-processing plants.



#### **Frigoscandia Lube Formula 410 (aerosol)** (PDF, 256kb)

Food-grade lubricant is compounded specifically to provide oil lubrication in the extreme cold environments found in food-processing plants.



#### **Frigoscandia Lube Formula 410XLT** (PDF, 196kb)

Food-grade lubricant is compounded specifically to provide oil lubrication in the extreme cold or hot environments found in food-processing plants.

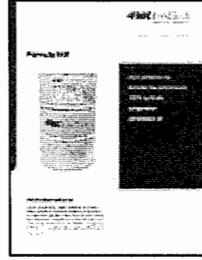
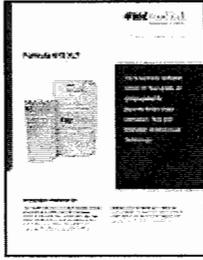
#### **Frigoscandia Lube Formula 500 Series Premium Synthetic Gear Oils** (PDF, 224kb)

Designed for severe-duty conditions where extreme temperatures cause problems with conventional

#### **Frigoscandia Lube Formula 668** (PDF, 390kb)

Designed to replace conventional refrigeration compressor oils in extreme low-temperature applications.

mineral oil-based gear lubricants.



## Formula 410 XLT



100% synthetic antiwear  
USDA H1 food-grade oil  
compounded for  
extreme-temperature  
lubrication. Now with  
Micronox® Antimicrobial  
Technology.

### **FRIGOSCANDIA FORMULA 410 XLT**

This food-grade lubricant is compounded specifically to provide oil lubrication in the extreme cold or hot environments found in food-processing plants. The base fluid is fully 100% synthetic and FDA approved. It has an extremely low pour point of -85°F, yet has sufficient body to lubricate at all temperatures. The additive package includes an effective

combination of E.P. and antiwear agents, and rust and oxidation inhibitors. This formulation contains a food-grade tackifier which can help prevent excessive dripping in low temperatures and when ambient temperatures rise.

## Formula 410 XLT

Incorporates new, proprietary antimicrobial additive technology, Micronox®, for enhanced antimicrobial protection against a wide variety of microbial agents, including yeasts, molds, gram-positive and gram-negative bacteria. A first in food-grade lubricants, Micronox® provides significant knockdown performance and has proven especially effective against *Listeria* (*Listeria monocytogenes*), *E. coli* (*Escherichia coli*) and *Salmonella* (*Salmonella typhimurium*) on contact and over extended lubrication intervals.

Whether you maintain ice cream manufacturing equipment, vegetable freezing tunnels, high- or low-temperature bearings, or any other extreme-temperature food-processing equipment, *Frigoscandia Formula 410 XLT* is the best solution for converting to an effective food-grade lubricant

FRIGO PART NUMBERS  
356176A-Gallon  
356176B-Keg  
356176C-Drum



Inspection	Typical Specification
Approx. ISO Grade	10 - 15
Approx. SAE Grade	5
Viscosity @ -40°C, cSt	1800
Viscosity @ 40°C, cSt	13.0
Viscosity @ 100°C, cSt	3.25
Viscosity Index	119
Pour Point, °F (°C)	-85 (-65)
Flash Point, °F (°C)	374 (190)
Fire Point, °F (°C)	414 (212)
Color	Clear
Micronox® Antimicrobial	Yes



### Wrong Lubricant, Costly Results

This actual equipment photo shows the wear and tear that results from using incorrect lubrication. Note the poor wear (waffling) of the ball rails. This incorrect maintenance protocol resulted in significant maintenance costs and downtime that could have been avoided.

To place an order or receive additional information call:  
**Order Entry Department**  
507-645-9546 800-433-6320  
Fax 507-645-9664

**FMC FoodTech**

FMC FoodTech Inc.  
P.O. Box 98  
1719 Cannon Road  
Northfield, MN 55057

Phone: +1 507 645 9546  
+1 800 433 6320  
Fax: +1 507 645 6148

## Formula 410 (Aerosol)



100% synthetic antiwear  
USDA/NSF-H1 authorized  
food-grade oil  
compounded for  
extreme low-temperature  
lubrication.

Now with Micronox®  
Antimicrobial Technology.

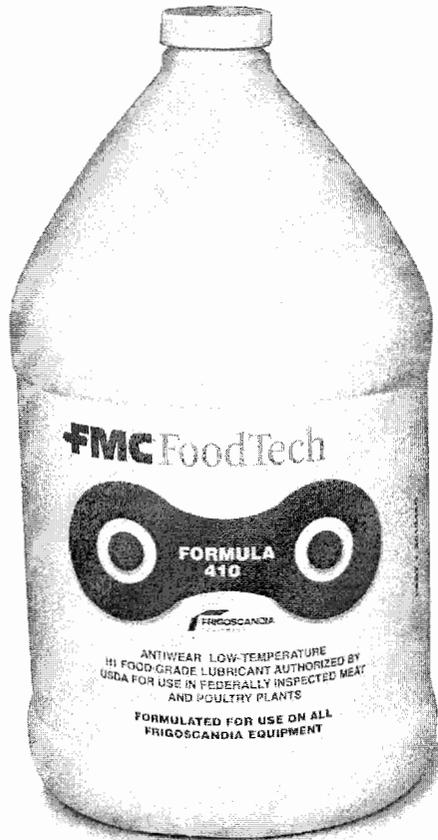
### FRIGOSCANDIA FORMULA 410 (AEROSOL)

Food-grade lubricant is compounded specifically to provide oil lubrication in the extreme cold environments found in food-processing plants. The base fluid is fully synthetic and FDA approved. It has an extremely low pour point of  $-76^{\circ}\text{F}$ , yet has sufficient body to lubricate at all temperatures. The additive package includes an effective combination of E.P. and antiwear agents, and rust and oxidation inhibitors. Food-grade tackifier is

present to provide lubricant adhesion and limited non-drip characteristics. Whether you maintain ice cream manufacturing equipment, vegetable freezing tunnels or any other extremely low-temperature food-processing equipment, *Frigoscandia Formula 410 (Aerosol)* is the best solution in converting extreme low temperature processing applications to an effective food-grade lubricant.



## Formula 410



Synthetic antiwear  
USDA-H1 authorized  
food-grade oil compounded  
for extreme low-temperature  
lubrication. Now with  
Micronox<sup>®</sup> Antimicrobial  
Technology.

### **FRIGOSCANDIA FORMULA 410**

Food-grade lubricant is compounded specifically to provide oil lubrication for the extreme cold environments found in food-processing plants. The base fluid is fully synthetic and FDA approved. It has an extremely low pour point of -76°F (-60°C), yet has sufficient body to lubricate at all temperatures.

Whether you maintain a Frigoscandia GYRoCOMPACT stack freezer or a Northfield style Low Tension Freezer, Frigoscandia Formula 410 is the best solution in converting to an effective food-grade lubricant.

## Formula 410

*Frigoscandia Formula 410* incorporates new, proprietary antimicrobial additive technology, Micronox®, for enhanced antimicrobial protection against a wide variety of microbial agents, including yeasts, molds, gram-positive and gram-negative bacteria. A first in food-grade lubricants, Micronox® provides significant knockdown performance and has proven especially effective against *Listeria* (*Listeria monocytogenes*), *E. coli* (*Escherichia coli*) and *Salmonella* (*Salmonella typhimurium*) on contact and over extended lubrication intervals.

*Frigoscandia Formula 410* is formulated with:

- Antiwear Additives
- E. P. Additives
- Rust Inhibitors
- Food-Grade Tackifier
- Micronox® Antimicrobial

Inspection	Typical Specification
Approx. ISO Grade	32
Approx. SAE Grade	10
Viscosity @ -40°C, cSt	7800
Viscosity @ -18°C, cSt	901
Viscosity @ 40°C, cSt	32.6
Viscosity @ 100°C, cSt	6.0
Viscosity Index	129
Pour Point, °F (°C)	-76 (-60)
Flash Point, °F (°C)	464 (240)
Fire Point, °F (°C)	518 (270)
Color	Clear
Micronox® Antimicrobial	Yes

### FRIGO PART NUMBERS

301546C-Gallon  
 301546ZA-Keg  
 350945B-Drum  
 350945C-Pail



### Wrong Lubricant, Costly Results

This actual equipment photo shows the wear and tear that results from using incorrect lubrication. Note the poor wear (waffling) of the ball rails. This incorrect maintenance protocol resulted in significant maintenance costs and downtime that could have been avoided.

To place an order or receive additional information call:  
**Order Entry Department**  
 507-645-9546 800-433-6320  
 Fax 507-645-9664

**FMC FoodTech**

FMC FoodTech Inc.  
 P.O. Box 98  
 1719 Cannon Road  
 Northfield, MN 55057

Phone: +1 507 645 9546  
 +1 800 433 6320  
 Fax: +1 507 645 6148

BENEFITS: EQUIPMENT: OVEN  
 IMPROVE HYGIENE: DSI  
 PRODUCT CHANGE: FRYERS  
 IMPROVE CONTROLS: INCREASE THROUGHPUT: FREEZER, GC  
 BATTER/DEALERS/FILTERS  
 REDUCE MAINTENANCE: FREEZER, NON-SELFSTACKING  
 FREEZER, IMPINGEMENT  
 REFRIGERATION  
 SPECIALTY

## Formula 322



Extreme-temperature  
synthetic USDA-H1  
food machinery grease.  
Now with Micronox®  
Antimicrobial Technology.

### FRIGOSCANDIA FORMULA 322

Developed to satisfy the extreme-temperature conditions found in several areas of modern food processing. The base soap used is a non-organic synthetic thickener which pumps freely at extremely low temperatures, yet has an extremely high dropping point of 500°F (260°C). The base oil is a Polyalphaolefin synthetic with excellent oxidation stability, antiwear performance, and a pour point of -90°F (-68°C).

The combination of the two major ingredients, the base oil and the thickener, give *Frigoscandia Formula 322* unsurpassed performance in the very cold environments found in all types of chilling and freezing equipment. The two ingredients allow the grease to maintain excellent body should the temperatures be elevated.

BENEFITS: EQUIPMENT: OVEN  
 IMPROVE HYGIENE  
 PRODUCT CHANGE: FRYERS  
 IMPROVE CONTROLS: BATTER/BREADERS/FILTERS  
 INCREASE THROUGHPUT: FREEZER, GC  
 REDUCE MAINTENANCE: FREEZER, NON-SELFSTACKING  
 REFRIGERATION: FREEZER, IMPINGEMENT  
 SPECIALTY

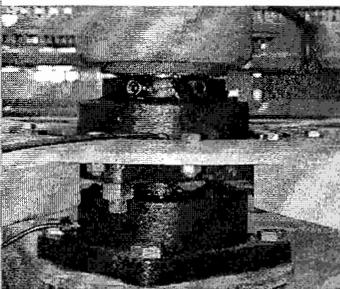
FRIGO PART NUMBERS  
 356210A-Tubes

## Formula 322

*Frigoscandia Formula 322* incorporates new, proprietary antimicrobial additive technology, Micronox®, for enhanced antimicrobial protection against a wide variety of microbial agents, including yeasts, molds, gram-positive and gram-negative bacteria. A first in food-grade lubricants, Micronox® provides significant knockdown performance and has proven especially effective against *Listeria* (*Listeria monocytogenes*), *E. coli* (*Escherichia coli*) and *Salmonella* (*Salmonella typhimurium*) on contact and over extended lubrication intervals. As with all synthetic lubricants, *Frigoscandia Formula 322* is not inexpensive. However, in temperature-sensitive areas where profits are profoundly affected by downtime and equipment failure, it is an excellent, and often the only, alternative. The benefits of a grease that pumps, flows, and lubricates in the most difficult environments of below-zero temperatures can quickly be seen.



Inspection	Typical Specification
Penetration, Worked	310-330
Dropping Point, °F (°C)	500 (260)
Color	White
<b>Base Oil:</b>	
Type	PAO Synthetic
Viscosity @ 100°F, SUS	156
Viscosity @ 210°F, SUS	46
Viscosity Index	140
Pour Point, °F (°C)	-90 (-68)
Flash Point, °F (°C)	460 (238)
Fire Point, °F (°C)	500 (260)
<b>Micronox® Antimicrobial</b>	<b>Yes</b>



**Wrong bearing lubrication could result in hard start-up and bearing failure.**

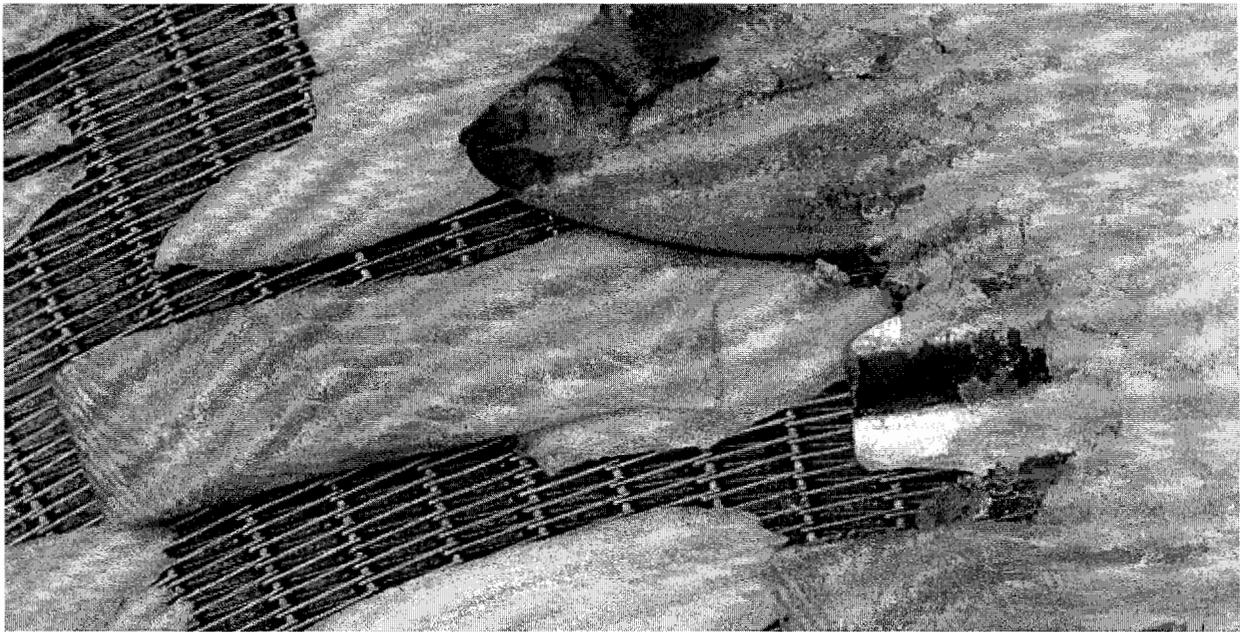
To place an order or receive additional information call:  
**Order Entry Department**  
 507-645-9546 800-433-6320  
 Fax 507-645-9664

**FMC FoodTech**

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 P.O. Box 98  
 1719 Cannon Road  
 Northfield, MN 55057

Phone: +1 507 645 9546  
 +1 800 433 6320  
 Fax: +1 507 645 6148

# Make food safety part of your lubrication routine



## With Formula 410 Phylax™ – high-quality anti-microbial lubricant

Proper lubrication of food processing equipment becomes complicated when you have to deal with the temperature extremes presented by thermal treatment such as food freezing and cooking.

Food processing itself restricts the range of lubricants, and the need to cope with extremely low as well as extremely high temperatures places further restrictions on the type lubricant that will successfully protect your equipment. That's why we developed Formula 410 Phylax™.

### HIGH-QUALITY LUBRICATION

Formula 410 Phylax™ is an NSF-listed, 100% synthetic anti-wear food-grade oil for extreme-temperature lubrication.

Incorporating Phylax™ Antimicrobial Technology, this food-grade lubricant is compounded specifically to provide lubrication in the extreme cold or hot environments found in food processing plants. It has an extremely low pour point of  $-60^{\circ}\text{C}$  ( $-76^{\circ}\text{F}$ ), yet has sufficient body to lubricate at all temperatures.

### NOW WITH ANTI-MICROBIAL PROTECTION

The additive package includes an effective combination of extreme pressure additives, anti-wear agents, and rust and oxidation inhibitors. This formulation contains a food-grade tackifier that can help prevent excessive dripping in low temperatures and when ambient temperatures rise.

Most important, though, it also incorporates our new, proprietary antimicrobial additive technology for enhanced protection against a wide variety of microbial agents.

FMC FoodTech Formula 410 Phylax™ is the best solution for converting to an effective food-grade lubricant. This is true whether you maintain ice cream manufacturing equipment, vegetable freezing tunnels, high- or low-temperature bearings, or any other extreme-temperature food-processing equipment.



## HOW DOES IT WORK?

Formula 410 Phylax™ incorporates new, proprietary antimicrobial additive technology for enhanced antimicrobial protection against a wide variety of microbial agents, including yeasts, molds, gram-positive and gram-negative bacteria.

A first in food-grade lubricants, the antimicrobial additive provides significant knock-down and ongoing growth retardant performance in the lubricant, and has proven especially effective against *Listeria (Listeria monocytogenes)*, *E. coli (Escherichia coli)* and *Salmonella (Salmonella typhimurium)* on contact and over extended lubrication intervals.

## BENEFITS

- Antimicrobial technology
- Wear- and rust inhibitors
- Food-grade tackifier

Formula 410 Phylax™ is available in 1-, 5-, and 55-gallon (US) recyclable drums.

Contact your FMC FoodTech representative or go on-line at [myfmcfoodtech.com](http://myfmcfoodtech.com) to get an immediate costing.

As always, we stand behind what we sell. One call gets it all.

*Formula 410 Phylax™*

*— Another great idea from FMC FoodTech*

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**COMPLAINANT'S EXHIBIT 72**

**NSF International, Registration Guidelines for  
Proprietary Substances and Nonfood Compounds**

# **NSF International Registration Guidelines for Proprietary Substances and Nonfood Compounds**

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**(Version 5.0)**

**February 1, 2007**



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To obtain NSF Registration of Proprietary and Nonfood Compounds per these guidelines, contact:

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This document is updated periodically to accurately reflect current regulations and methodologies. Users may request clarifications and interpretations, or propose revisions by contacting NSF at the address provided above.

**Version 5.0:** February 1, 2007

**NSF REGISTRATION GUIDELINES FOR  
PROPRIETARY SUBSTANCES AND NONFOOD COMPOUNDS**

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Unless otherwise referenced as normative, the appendices are not considered an integral part of NSF documents. They are provided as general guidelines to the manufacturer, regulatory agency, user, or certifying organization.

## **NSF REGISTRATION PROGRAM GUIDELINES FOR PROPRIETARY SUBSTANCES AND NONFOOD COMPOUNDS**

### **1. General**

#### **1.1 Background**

Historically, the Food Safety and Inspection Services (FSIS), a branch of the United States Department of Agriculture (USDA), required meat and poultry facilities to use pre-processing compounds (Proprietary Substances) and products used in and around food processing areas (Nonfood Compounds) that had been approved under the USDA authorization program. This requirement, based upon recognized public health benefits, carried over into many other product applications (including fishery and retail operations). Product evaluations were primarily based upon formulation and label review and generally did not include testing. Upon a determination of compliance, the USDA would issue a Letter of Authorization and the product would be listed in the next edition of the *List of Proprietary Substances and Nonfood Compounds*. The USDA authorization ensured that FSIS inspectors would approve a product's use within meat and poultry operations.

Two *Federal Register* notices, published August 25, 1997 and the final on February 13, 1998, announced the end of the USDA authorization program. The FSIS significantly altered their approach to facility inspections, eliminating the need for USDA product evaluation. FSIS moved away from prescriptive regulations to performance-based reviews. This new approach was driven by the established system of Hazard Analysis and Critical Control Points (HACCP) facility operation. Under HACCP, all meat and poultry establishments must identify and manage critical control points (primarily relating to microbial contamination) for food processing. For Proprietary Substances and Nonfood Compounds, the facility operators must select the appropriate product to not only meet their operational needs, but also their HACCP requirements.

In December of 1999, NSF launched the Registration and Listing Program for Proprietary Substances and Nonfood Compounds. This program mirrors the prior USDA program evaluation for all product categories and streamlines the registration process. Working with the USDA, NSF captured all prior review guidelines and packaged them into this single document, which serves as the foundation upon which products are evaluated and registered by NSF. New products and formulations were added to the list by completing the NSF Registration process. The labels of NSF Registered products bear an NSF Registration Number, a Registration Mark, and a category code.

#### **1.2 Purpose**

This voluntary Registration and Listing program has established evaluation criteria for proprietary substances and nonfood compounds used in food processing and food handling facilities inspected by the USDA, and other facilities where the former USDA program was utilized for compound authorization. This program reflects the formulation, label, and use instruction requirements from the following USDA documents and more recent unpublished draft revisions and guidelines:

“Guidelines for Obtaining Authorization of Compounds to be used in Meat and Poultry Plants”, U.S. Department of Agriculture, Food Safety and Quality Service, Agriculture Handbook No. 562, September 1979.

“List of Proprietary Substances and Nonfood Compounds”, U.S. Department of Agriculture, Food Safety and Inspection Service, Miscellaneous Publication No. 1419, January 1, 1998, and Supplement dated July 1, 1998.

### **1.3 Scope**

This program is intended to cover products used in the areas of food processing, handling, and storage, and that do not otherwise require declaration on food labeling under the Code of Federal Regulations (CFR) Title 9 (Part 590) or Title 9 (Parts 317 and 381). This program covers toxicology, odor potential, and intended use classifications for a wide range of products.

### **1.4 Limitations**

This program does not intend to provide guidelines for operational issues inside food processing facilities. Meat, poultry, and shell egg processing facilities are inspected by the USDA FSIS, which ultimately determines the acceptability of any product.

### **1.5 Product Registration**

Products meeting the requirements set forth in this document are issued an NSF Registration Number and are authorized to bear an NSF Registration Mark on the product and in advertising. NSF Registered products appear in the official NSF Listing on the NSF website ([www.nsfwhitebook.org/](http://www.nsfwhitebook.org/)).

## **2. Products Covered under this Program**

### **2.1 Proprietary Substances**

Products that are used in the pre-processing of food at meat and poultry plants are defined as "proprietary substances". These include products such as antifoaming agents, marking agents, poultry scald media, hog scald media, tripe processing substances, fruit and vegetable washing products, preflushing agents, refining agents, rendering agents, release agents, denaturants, and other miscellaneous substances. Category codes that are assigned to these products are shown in Table I.

**Table I. Category Codes – Proprietary Substances**

Category	Category Code	Intended Use
Smoke Flavoring Agents	1	Natural and artificial smoke flavoring
Marking Agents	2A	Branding inks
	2B	Tattoo inks
	2C	Marking crayons
Food Processing Substances	3A	Poultry scald agents
	3B	Hog scald agents
	3C	Tripe denuding, bleaching and neutralizing agents
	3D	Substances for washing fruits and vegetables
	3E	Preflushing agents for casings
	3F	Refining agents for rendered fats
	3G	Rendering agents
	3H	Release agents
Denaturants	4A	Denaturants for meat requiring tankage
	4B	Denaturants for meat not intended for human food
	4C	Denaturants for poultry requiring tankage
	4D	Denaturants for poultry not intended for human food
Substances Requiring Letter Indicating Authorized Use	5A	Foam control in soups, stews, rendered fats, curing pickle
	5B	Substances for cleaning or treating feet or other edible parts
	5C	Miscellaneous

**2.2 Nonfood Compounds**

Products that are used in and around food processing areas, but are not intended for direct food contact, or are not expected to become a component of a meat, poultry, or egg product, are defined as “nonfood compounds”. These include products such as maintenance and cleaning chemicals, sanitizers and pesticide chemicals, lubricants, water treatment compounds, shell egg cleaning, defoaming, destaining, and sanitizing compounds, and other miscellaneous products. Category Codes assigned to the products are shown in Table II.

**Table II. Category Codes – Nonfood Compounds**

Category	Category Code	Intended Use
Cleaning Products	A1	General cleaners
	A2	Soak tank, steam/mechanical cleaners
	A3	Acid cleaners
	A4	Floor and wall cleaners
	A5	Freezer floor and wall cleaners
	A6	Scouring cleaners
	A7	Metal polishes – nonfood contact
	A8	Degreasers/carbon removers
	AX	Ingredients for use in Cleaning Products

Laundry Products	B1	Laundry products – food contact
	B2	Laundry products – nonfood contact
	BX	Ingredients for use in Laundry Products
Nonprocessing Area Products	C1	General
	C2	Toilet/dressing room
	C3	Paint removers
	CX	Ingredients for use in Nonprocessing Area Products
Antimicrobial Products	D1	Antimicrobial agents always requiring a rinse
	D2	Antimicrobial agents not requiring rinse
	DX	Ingredients for use in Antimicrobial Products
Hand Care Products	E1	Handwashing products
	E2	Handwashing and sanitizing products
	E3	Hand sanitizing products
	E4	Hand lotions/cleaners – nonfood contact
	EX	Ingredients for use in Hand Care Products
Pesticides	F1	Nonresidual pesticides
	F2	Residual pesticides
	F3	Rodenticides
	F4	Fumigants
	F5	Fumigants
	FX	Ingredients for use in Pesticides
Water Treatment Products	G1	General
	G2	Phosphate products
	G3	Silicate products
	G4	Chlorine products
	G5	Cooling and retort water products
	G6	Boiler, steam line products – food contact
	G7	Boiler, steam line products – nonfood contact
	GX	Ingredients for use in Water Treatment Products
Lubricants	H1	General – incidental food contact
	H2	General – nonfood contact
	H3	Soluble oils
	HX-1	Ingredients for use in H1 Lubricants
	HX-2	Ingredients for use in H2 Lubricants
	HX-3	Ingredients for use in H3 Lubricants
Heat Transfer Fluids	HT1	Heat transfer fluids - incidental food contact
	HT2	Heat transfer fluids – nonfood contact
	HTX-1	Ingredients for use in HT1 Heat Transfer Fluids
	HTX-2	Ingredients for use in HT2 Heat Transfer Fluids
Absorbents/Anti-Slip Agents	J1	General
	JX	Ingredients for use in Absorbents/Anti-Slip Agents
Solvent Cleaners	K1	Nonprocessing area products
	K2	Electronic instrument cleaners
	K3	Adhesives/glue removers
	KX	Ingredients for use in Solvent Cleaners
Sewer and Drain Cleaners	L1	General

	L2	Enzymatic cleaners
	LX	Ingredients for use in Sewer and Drain Cleaners
Miscellaneous Products	P1	Miscellaneous
	PX	Ingredients for use in Miscellaneous Products
Shell Egg Products	Q1	General cleaners
	Q2	Destainers
	Q3	Quaternary ammonium chloride sanitizers
	Q4	Chlorine sanitizers
	Q5	Foam control products
	Q6	Iodine sanitizers
	QX	Ingredients for use in Shell Egg Products
Coatings	R1	Coatings for use on direct food contact surfaces
	R2	Coatings for use on structural surfaces – nonfood contact
	RX-1	Ingredients for use in R1 Coatings
	RX-2	Ingredients for use in R2 Coatings

### 3. Procedures for the Evaluation of Proprietary Substances and Nonfood Compounds

#### 3.1 Request for Evaluation

Product formulations may be submitted to NSF for registration against the requirements of this document. General program information, product listings, the application and guidelines are also available through the web site at [www.nsfwhitebook.org](http://www.nsfwhitebook.org). Contact information is shown below:

NSF Registration Program for Proprietary Substances and Nonfood Compounds  
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 Ann Arbor, MI 48113-0140

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 Toll Free (USA): 888-NSF-FOOD  
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 Telephone: (+32) 2 771-3654  
 Fax: (+32) 2 763-0013

## **3.2 Formulation Submission and Labeling Requirements**

### **3.2.1 Formulation submission**

In order to evaluate a product for use in food processing facilities, the complete chemical composition must be known. This information is necessary to determine the status of ingredients, both active and inert, under existing regulations and policies of the Federal Meat, Poultry and Egg Products Inspection Acts, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and the Federal Food, Drug, and Cosmetic Act (FFDCA).

Formulation submissions must contain the following information:

- The Chemical Abstract Service Registry Number (CAS number) of each ingredient
- The complete chemical name of each ingredient (Colorants, dyes, pigments, and fluorescent brighteners may be identified by Colour Index (C.I.) reference).
- Trade names
- The name of the supplier(s) of each ingredient
- The amount of each ingredient must be expressed in percent by weight. The notation "Trace" is not acceptable for ingredients at low levels. All formulas must total 100 percent. Ranges of ingredients may be acceptable based on the product type and end use.
- The regulatory reference which allows the ingredient to be used in contact with food. For example: Lubricants with Incidental Food Contact are required to meet 21 CFR Section 178.3570 or other referenced sections. NSF will also review FDA Letters of Opinion, Food Contact Notification Documentation, Threshold of Regulation Documentation, and other Letters of Opinion from legal firms or consultants with expertise in direct and indirect food additives.

Manufacturers of compounds containing bacterial cultures or ingredients derived from bacteria are required to provide NSF a taxonomic identification (identification by genus and species) of the cultures. Only defined and characterized strains of viable microorganisms that are not known to cause disease in healthy adult humans will be considered for Registration. A confirming analysis for salmonella will be made on the sample submitted to NSF during the initial review of a product submitted to NSF for Registration.

### **3.2.2 Label submission**

Electronic or hard copy submission of product labels shall be included with each application. If only hardcopies are available, a copy or original of each product label shall accompany each application. For products regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the current EPA registered label is required, as well as the label that appears on the product.

### **3.2.3 Label content**

For all products, labeling shall include at least the following:

- Name of the product
- Name of the company marketing the product
- The label with the Registration Mark, Category Code(s) and Registration Number (designated by XXXXXX) shall be submitted to NSF for approval prior to Registration.

- NSF Registration Number, shall be added after the product has been Registered

The new version of the Registration Mark (Figure 1) shall be implemented during maintenance, repair, or replacement of marking equipment, or when new product labels, data sheets or other literature are printed. This requirement shall go into effect for all existing registered products and new products submitted for registration, as of **February 1, 2008**.



Figure 1

Until that time, use of the original Mark (Figure 2) or the intermediate Mark (Figure 3) is acceptable, with the exception of EPA registered products (see below).



Figure 2



Figure 3

The company name on the application forms and all labels shall be in complete agreement.

If a formulation was previously authorized by USDA and reference is made to such authorization on the labeling or other printed material, the statement must be specific, following this example:

*NSF (insert category code) Registered, meets USDA 1998 (insert category code) Guidelines.*

Unless otherwise stated, the label is not required to include a statement of ingredients or directions for use. However, in most cases a description of the nature or purpose of the product and directions for its use are beneficial to the user. If directions for use are not provided on the label or data sheets, they may be requested by NSF to evaluate category specific requirements.

The use of all cleaning compounds must be followed by a potable water rinse unless specifically exempt. Labels for such products may not carry general directions stating that no rinse is necessary unless the directions also state that rinsing with potable water is required when the product is used in a food processing facility.

Label content for antimicrobial products, and other economic poisons, regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) require a preparation for which pesticidal claims (e.g., algacidal, fungicidal, germicidal, sanitizing, etc.) are made, to bear a label showing the active ingredients and to be appropriately registered with the United States Environmental Protection Agency (EPA), Registration Division, Office of Pesticide Programs, Washington, DC 20460. In order to be applicable for use in meat and poultry plants, the label must also include directions, or reference to use directions and precautions for such use as required by those regulations. Accordingly, any such preparations offered for use in federally inspected meat and poultry plants must be labeled in compliance with those requirements. This includes appropriate notification to the EPA of the use of the NSF Mark. The Mark to be used by EPA registered products is shown in figure 4.



Figure 4

To assure safe use of boiler water additives where the steam produced may contact food products, or fruit and vegetable washing compounds, regulations under the FFDCA require that labels for such products include the directions for use adequate to insure compliance with those regulations. Where additives are prepared to custom specifications of individual customers, or where for other reasons it is not feasible to include use directions on the container label, that information may be supplied to users in such forms as control charts, technical bulletins, service reports, or other written communications. In those cases, the supplementary information must be submitted to NSF.

Because of the possibility of residues remaining in food products as a result of using chemicals in denuding or otherwise processing tripe, or in scalding hog or poultry carcasses, the container labels for such preparations must follow 9 CFR, Sections 318.1 (d) and 381.145 (i) which requires that labels or labeling of containers of hog scalds, poultry scalds, and tripe denuding compounds bear adequate directions to ensure use in compliance with any limitations prescribed in 21 CFR Chapter I, Subchapter A or Subchapter B, or 9 CFR Chapter 3, Subchapter A or Subchapter E.

#### **3.2.4 Registration statements**

If a product is Registered by NSF, the company shall place the NSF Registration Mark, NSF Registration Number, and Category Code on the product label. Any other uses of, or references to, the NSF name shall be approved by NSF in writing.

### **3.3 Preparation and Submission of Samples**

#### **3.3.1 Submission of samples**

After initial review of the formulation is conducted, NSF may request submission of an actual product sample. The product sample shall be submitted with the appropriate number assigned to the application, as instructed by NSF. The quantity of sample shall be specified in the request generated by NSF. Samples shall not be submitted with the initial application form. If samples are received without specific instruction from NSF, they may be returned or discarded.

### **3.3.2 Sample size and shipment**

If samples are requested, sample size shall be specified by NSF. Samples shall be shipped by express or other suitable means of air or surface transportation. Some corrosive and hazardous materials are classified as un-mailable by the U.S. Postal Service and may be subject to hazardous materials (HAZMAT) shipping regulations (including U.S. Department of Transportation Regulations 49 CFR Parts 171-178, and Occupational Safety and Health Administration Regulations 29 CFR, Parts 1910.101-1910.120, and 1910.1000-1910.1500). Consult the mail carrier for proper packaging instructions. Damaged and/or leaking samples will not be accepted for processing.

### **3.4 Notification by NSF of Evaluation Progress**

Upon receipt by NSF of completed applications, the company will be notified that NSF has received the materials. If the application or supporting documentation is incomplete, the company shall be informed and a list of required information will be attached.

#### **3.4.1 Product is acceptable**

When a product is found to be acceptable for the proposed use, the company shall be notified and a Registration Letter shall be provided to the company. The Registration Letter shall include a description of the intended end use, Category Code(s), product name, NSF Registration Mark and NSF Registration Number. Registration Letters may be supplied to federal inspectors as proof of Registration. An example of an NSF Registration Letter is shown in Attachment A.

#### **3.4.2 Product is unacceptable**

When a product is found to be unacceptable for the proposed use, the company will be informed with an explanation of the reason(s) for the product's unacceptability. If the application is incomplete, the company shall be informed and a list of required information will be included.

### **3.5 Published Listing of NSF Registered Products**

NSF will maintain an official listing of registered products online at [www.nsfwhitebook.org](http://www.nsfwhitebook.org). It will be an active database, which shall be updated daily. In addition, Registration Letters will be available through the NSF online listing for customers and inspectors.

### **3.6 Termination of Registration**

NSF Registration of a proprietary substance or nonfood compound may be terminated for reasons including but not limited to:

- Change in formulation or labeling text without prior review by NSF;
- Lack of payment of annual listing and other fees, as required;
- Misleading information provided to NSF regarding product formulation;
- Presence of salmonella and/or other pathogenic microorganisms in bacterial/enzyme containing products.
- Failure to notify NSF of any transaction which results in the sale, transfer, or merger of a company, or sale or transfer of formulation of the registered products. Notification of such a transaction may be made in the form of a letter from each company, or a copy of the legal document which records the transaction accompanied by a letter of explanation. The acquiring company shall confirm that there has been no change in the formulation of the products in question and no change in label text other than the company name. For any product that has previous registration with EPA, the acquiring company shall also provide a copy of an acknowledgement from EPA confirming the registration transfer.

### 3.7 Products Not Traditionally Requiring Registration

The products referred to in this section may be acceptable for use in food and nonfood processing areas without NSF Registration at the discretion of FSIS inspectors. However, product categories may be developed at the discretion of NSF to cover such products and evaluation criteria will be developed in consultation with the USDA. Products which are classified as pesticides must be registered with the Registration Division, Office of Pesticide Programs, U.S. Environmental Protection Agency, Washington, DC 20460, and used according to label directions. All products governed by FDA Regulations shall be used in accordance with those regulations (21 CFR Parts 170-199).

- Outdoor pest control substances, such as herbicides, bird control products, and other pesticides labeled for outdoor use only;
- Pest control devices which do not contain pesticides such as sticky boards, fly paper, insect electrocutors, light traps, bait boxes, and bait fountains;
- Office products, such as dusting aids, furniture waxes/polishes, wall/floor finishes or waxes, rug or upholstery shampoos or cleaners, rug anti-static treatments, and window/glass cleaners;
- Cafeteria or retail food services products, such as rinse additives, tarnish removers, and hand dishwashing soaps/detergents;
- Products associated with heating systems, such as fuel additives, firebox or flue treatments or cleaners;
- Products used in treating inedible materials, such as hides, hair, or feathers;
- Products used in holding pens, trucks, and transporting cages, such as pesticides, disinfectants or cleaners used in animal facilities, or chemicals used for deodorizing or dissolving animal waste;
- Cleaning devices such as scouring pads, towels, mops, brooms;
- Primary packaging materials covered under 9 CFR Sections 317.24 and 381.44;
- Gloves covered under FFDCA;
- Wearing apparel;
- Adhesives covered under 21 CFR Section 175.105 or 175.125;
- Printing inks covered under FFDCA;
- Edible and inedible casings;
- Secondary packaging materials such as over-cartons, labels, label bands, boxes;
- Products used in sewage treatment outside the plant, such as solvents and odor control;
- Products used in cooling towers, evaporative condensers or secondary cooling water loops;
- Products used on the exterior of buildings or immediate surrounding areas;
- Products used for cleaning or maintenance of the exterior of vehicles.

#### **4. Product Specific Requirements – Proprietary Substances**

##### **4.1 General Requirements**

The following intentionally added heavy metals:

- Antimony
- Arsenic
- Cadmium
- Lead
- Mercury
- Selenium

And, other ingredients that are classified by NSF International as:

- Carcinogens
- Mutagens
- Teratogens
- Mineral Acids
- Odorous

are subject to exclusion based on the discretion of NSF International. Factors taken into consideration will be the percent by weight of the ingredient of concern, the products intended use, and potential risks associated with exposure.

##### **4.2 Smoke Flavoring Agents (Category Code 1)**

Natural smoke flavoring and artificial smoke flavoring do not require registration prior to their designated use. However, the use of such flavorings is still subject to labeling requirements and other restrictions that apply to the use of any flavoring. Inspectors may use the manufacturer's letter of guaranty as an indication of compliance with FDA requirements.

##### **4.3 Marking Agents (Category Codes 2A, 2B, 2C)**

Typical uses of marking agents include (1) the branding of meat and poultry carcasses and parts, (2) tattooing official marks on livestock and live swine. Inks or crayons shall be formulated with FD&C certified colors and other substances such as drying agents and diluents that are considered "Multiple Purpose GRAS (generally recognized as safe) Food Substances" as specified in 21 CFR Part 182, Subpart B. The following substances are also acceptable for use in marking agents: water, dextrose, isopropyl alcohol, ethyl alcohol, shellac, and acetone as specified in 21 CFR, Section 73.1(b).

##### **4.4 Poultry Scald Agents (Category Code 3A)**

These products are typically used in the defeathering of poultry carcasses. Products containing one or more of the substances listed in Table III are acceptable. Unless a limitation is otherwise stated, the product may be used at a level sufficient for the purpose, provided that the substance will be removed by subsequent rinsing with potable water during dressing operations.

**Table III. Poultry scald agents**

Substances	Use instructions
Alpha-hydro-omega-hydroxy-poly (oxyethylene) poly (oxypropylene) (minimum 15 moles) poly (oxyethylene) block copolymer (polyoxamer)	Not to exceed 0.05% by weight in scald water.
Dimethylpolysiloxane	Sufficient for purpose
Dioctyl sodium sulfosuccinate	
Dipotassium phosphate	
Ethylenediamine-tetraacetic acid (sodium salts)	
Lime (calcium oxide, calcium hydroxide)	
Polyoxyethylene (20) sorbitan monooleate	Not to exceed 0.0175% in scald water.
Potassium hydroxide	Sufficient for purpose
Propylene glycol	
Sodium acid phosphate	
Sodium acid pyrophosphate	
Sodium bicarbonate	
Sodium carbonate	
Sodium dodecylbenzene sulfonate	
Sodium-2-ethyhexyl sulfate	
Sodium hexametaphosphate	
Sodium hydroxide	
Sodium lauryl sulfate	
Sodium phosphate (mono-, di-, tribasic)	
Sodium pyrophosphate	
Sodium sesquicarbonate	
Sodium sulfate	
Sodium tripolyphosphate	
Tetrasodium pyrophosphate	

#### 4.5 Hog Scald Agents (Category Code 3B)

These products are typically used in the dehairing of hog carcasses. Products containing one or more of the substances listed in Table IV are acceptable. The product may be used at a level sufficient for the purpose, provided that the substance will be removed by subsequent rinsing with potable water during dressing operations.

**Table IV. Hog scald agents**

Substances
Caustic soda
Dimethylpolysiloxane
Diocetyl sodium sulfosuccinate
Disodium-calcium ethylene- diamine-tetraacetate
Disodium phosphate
Ethylenediamine-tetraacetic acid (sodium salts)
Lime (calcium oxide, calcium hydroxide)
Propylene glycol
Soap (prepared by the reaction of calcium, potassium, or sodium with rosin or fatty acids of natural fats and oils)
Sodium acid pyrophosphate
Sodium carbonate
Sodium dodecylbenzene sulfonate
Sodium gluconate
Sodium hexametaphosphate
Sodium lauryl sulfate
Sodium mono and dimethyl-napthalene sulfonate (molecular weight 245-260)
Sodium n-alkylbenzene sulfonate (alkyl group predominantly C <sub>12</sub> and C <sub>13</sub> and not less than 95 percent C <sub>10</sub> and C <sub>16</sub> )
Sodium pyrophosphate
Sodium silicates (ortho, meta and sesqui)
Sodium sulfate
Sodium tripolyphosphate
Sucrose
Triethanolamine dodecylbenzene sulfonate
Trisodium phosphate

#### 4.6 Tripe Processing Substances (Category Code 3C)

These products are typically used in the denuding, bleaching, or neutralizing of tripe. Products containing one or more of the substances listed in Table V are acceptable. The product may be used at a level sufficient for the purpose, provided that the substance will be removed by subsequent rinsing with potable water during dressing operations.

**Table V. Tripe processing substances**

Substances
Hydrogen peroxide
Lime (calcium oxide, calcium hydroxide)
Sodium carbonate

Sodium gluconate
Sodium hydroxide
Sodium persulfate
Sodium silicates (ortho, meta and sesqui)

**4.7 Fruit and Vegetable Washing Products (Category Code 3D)**

These products are used for washing fruits and vegetables that are used as ingredients of food products. Products shall be formulated and labeled in compliance with 21 CFR, Section 173.315 and labels shall include information on recommended use levels and procedures for rinsing with potable water. Products containing one or more of the substances listed in Table VI or GRAS (21 CFR, Parts 182 and 184) are acceptable upon review by NSF. Unless a limitation is stated, the use instructions shall state that the "minimum amount sufficient for purpose" is to be used.

**Table VI. Fruit and vegetable washing products**

Substances	Use instructions
A mixture of alkylene oxide adducts of alkyl alcohols and phosphate esters of alkylene oxide adducts of alkyl alcohols consisting of: alpha-alkyl-(C <sub>12</sub> -C <sub>18</sub> )-omega-hydroxy-poly (oxyethylene) (7.5-8.5 moles) /poly (oxypropylene) block copolymer having an average mol. wt. of 810; alpha-alkyl (C <sub>12</sub> -C <sub>18</sub> )-omega-hydroxypoly (oxyethylene)(3.3-3.7 moles) polymer having an average mol. wt. of 380, and subsequently esterified with 1.25 moles phosphoric anhydride; and alpha-alkyl (C <sub>10</sub> -C <sub>12</sub> )-omega hydroxypoly (oxyethylene) (11.9-12.9 moles) / poly (oxypropylene) copolymer, having an average mol. wt. of 810, and subsequently esterified with 1.25 moles phosphoric anhydride	Not to exceed 0.2% in lye peeling solution to assist in lye peeling of fruits and vegetables.
Aliphatic acid mixture consisting of valeric, caproic, enanthic, caprylic, and pelargonic acids	Not to exceed 1% in lye peeling solution.
Polyacrylamide	Not to exceed 10 ppm in wash water. Contains not more than 0.2% acrylamide monomer.
Potassium bromide	Minimum sufficient for purpose
Sodium n-alkylbenzene sulfonate (alkyl group predominately C <sub>12</sub> and C <sub>13</sub> and not less than 95 percent C <sub>10</sub> to C <sub>16</sub> )	Not to exceed 0.2% in wash water.
Sodium dodecylbenzene-sulfonate (alkyl group predominately C <sub>12</sub> and not less than 95 percent C <sub>10</sub> to C <sub>16</sub> )	Minimum sufficient for purpose
Sodium 2 ethyl-hexyl sulfate	
Sodium hypochlorite	
Sodium mono-and dimethyl naphthalene sulfonates (mol.wt.245-260)	Not to exceed 0.2% in wash water.

**4.8 Preflushing Agents for Casings (Category Code 3E)**

These products are used to clean casings prior to usage and shall consist of ingredients that are GRAS (21 CFR, Parts 182 and 184). Thorough rinsing with potable water is required before contact is made with food products.

**4.9 Refining Agents for Rendered Fats (Category Code 3F)**

These products are used as refining agents to separate fatty acids and glycerol in rendered fats. Products containing one or more of the substances shown in Table VII may be acceptable upon review by NSF. These substances shall be eliminated during the process of manufacturing.

**Table VII. Refining agents for rendered fats**

<b>Substances</b>
Acetic acid
Bicarbonate of soda
Carbon (purified charcoal)
Caustic soda (sodium hydroxide)
Diatomaceous earth; Fuller's earth
Sodium carbonate
Tannic acid

**4.10 Rendering Agents (Category Code 3G)**

These products are typically used to aid in rendering animal fats. Products containing tricalcium phosphate or trisodium phosphate may be acceptable upon review by NSF.

**4.11 Release Agents (Category Code 3H)**

These products are used on grills, loaf pans, cutters, boning benches, chopping boards, or other hard surfaces in contact with meat and poultry food products to prevent food from adhering during processing. Products containing edible oils such as corn oil, cottonseed oil and soybean oil, mineral oil complying with 21 CFR, Part 172, Section 172.878, and other GRAS substances may be acceptable upon review by NSF. In addition, defoaming agents complying with 21 CFR, Section 173.340 (a) (1) and (a) (2) may be acceptable.

**4.12 Denaturants**

Denaturants formulated and labeled according to the following regulations may be acceptable for use: food/feed additives (21 CFR, Parts 573 and 584), certifiable color additives (21 CFR, Parts 73 and 74), GRAS materials (21 CFR, Parts 182 and 184) or other substances considered acceptable by the FDA Bureau of Veterinary Medicine.

**4.12.1 Denaturants for meat requiring tankage (Category Code 4A)**

Products under this category are typically used for denaturing carcasses, parts thereof, meat, and meat food products (other than rendered animal fat) condemned for pathology and intended for disposal only as tankage. The label shall identify all ingredients. Products containing crude carbolic acid, cresylic disinfectant, or a formulation consisting of 1 part FD&C Green No. 3, 40 parts oil of citronella, 40 parts liquid detergent, and 40 parts water, may be acceptable upon NSF review.

**4.12.2 Denaturants for meat not intended for human food (Category Code 4B)**

Products under this category are typically used for denaturing carcasses, parts thereof, meat, and meat food products intended for disposal for purposes other than human food. Products marketed as aqueous solutions may contain chemical preservatives and/or emulsifying agents regulated under the 21 CFR, Parts 172, 182, and 184. The label shall

identify all ingredients. Products containing finely powdered Charcoal, FD&C Blue No. 1, FD&C Blue No. 2, and FD&C Green No. 3, may be acceptable upon review.

**4.12.3 Denaturants for poultry requiring tankage (Category Code 4C)**

Products under this category are typically used for denaturing poultry and poultry products condemned for pathology and intended for disposal only as tankage. The label shall identify all ingredients. Products containing crude carbolic acid, fuel oil, kerosene, used crankcase oil, or phenolic disinfectants conforming to commercial standard CS 70-41 or CS 72-41, may be acceptable based on review by NSF.

**4.12.4 Denaturants for poultry not intended for human food (Category Code 4D)**

Products under this category are typically used for denaturing poultry and poultry products intended for disposal for purposes other than human food. Products marketed as aqueous solutions may contain chemical preservatives and/or emulsifying agents regulated under the 21 CFR, Parts 172, 182, and 184. The label shall identify all ingredients. Products containing FD&C Blue No. 1, FD&C Blue No. 2, FD&C Green No. 3, FD&C Red No. 3, FD&C Red No. 40, and Ultramarine Blue, may be acceptable based upon review by NSF.

**4.13 Substances Requiring a Letter**

**4.13.1 Antifoaming agents (Category Code 5A)**

Products containing dimethylpolysiloxane, other substances cleared for use under 21 CFR, Parts 173, Sections 173.340 (a)(1), and (a)(2), or substances considered GRAS, 21 CFR, Parts 182 and 184), may be acceptable to retard foam in soups, stews, and rendered fats and curing pickle based on the limitations specified in 21 CFR, Section 173.340 (a)(1) and (a)(2), upon NSF review.

**4.13.2 Feet and other edible part cleaning agents (Category Code 5B)**

Products containing hydrogen peroxide or other GRAS substances (21 CFR, Parts 182 and 184) may be acceptable to clean or treat animal feet or other edible parts, upon NSF review. Substances must be removed from product by rinsing with potable water.

**4.13.3 Miscellaneous (Category Code 5C)**

This category is intended for products that do not fit into established Category Codes. The decision as to whether a product needs to be reviewed and registered by NSF shall be made on a case-by-case basis, and may include consultation with USDA. The criteria used in the evaluation of these products shall be determined based upon its intended use. If the intended use is not covered by an existing USDA or FDA regulation, NSF may consult USDA and/or FDA to develop criteria for the product. These products may not require NSF registration because their components are to be listed in the statement of ingredients on the label of the meat or poultry product.

**5. Product Specific Requirements – Nonfood Compounds**

**5.1 General Requirements**

The following intentionally added heavy metals:

- Antimony
- Arsenic
- Cadmium
- Lead

- Mercury
- Selenium

And, other ingredients that are classified by NSF International as:

- Carcinogens
- Mutagens
- Teratogens
- Mineral Acids
- Odorous

are subject to exclusion based on the discretion of NSF International. Factors taken into consideration will be the percent by weight of the ingredient of concern, the products intended use, and potential risks associated with exposure.

## **5.2 Cleaning Products**

The following requirements apply to all cleaning products under Category Codes A1, A2, A3, A4, A5, A6, A7, and A8, unless specifically exempted:

- All food products and packaging materials shall be removed or carefully protected prior to usage;
- A potable water rinse is required after use;
- When used according to manufacturer's instructions, cleaners shall not exhibit a noticeable odor nor leave a visible residue. If fragrant ingredients are present in the cleaning product, the product shall undergo odor testing performed by NSF International Chemistry Laboratory
- Boric acid and salts thereof, may be used in products only at concentrations up to 90 percent in association with strong acids, strong alkalis, soaps, or synthetic detergents.
- Products containing bacterial/enzyme cultures shall undergo salmonella analysis performed by NSF International Microbiology Laboratory.

### **5.2.1 General Use (Category Code A1)**

These products are used for general cleaning on all surfaces, or for use with steam or mechanical cleaning devices in all departments. They are typically neutral or mildly alkaline products consisting of any combination of soaps, detergents, wetting agents, emulsifiers, solubilizers, and common inorganic builders.

### **5.2.2 Soak tanks and steam/mechanical cleaning (Category Code A2)**

These strongly alkaline products (containing in excess of 20 percent caustic soda or other ingredients with the equivalent causticity) may be acceptable for use in soak tanks or with steam or mechanical cleaning devices in any department, upon review by NSF.

### **5.2.3 Acid Cleaners (Category Code A3)**

These acidic products consisting of mineral acids, organic acids, or acidic salts may be acceptable for use in any department for the removal of rust, corrosion, scale, or other deposits which are not readily removed by alkaline preparations.

### **5.2.4 Floor and wall cleaners (Category Code A4)**

These general use cleaners for floors and walls may be acceptable based on NSF review.

**5.2.5 Floor and wall cleaners for subfreezing temperatures (Category Code A5)**

Glycol or alcohol-based products may be acceptable for use on floors and walls in areas with subfreezing temperatures, upon NSF review. A potable water rinse is not required provided that the solution and solubilized soil are effectively removed by wiping or wet vacuuming.

**5.2.6 Scouring cleaners (Category Code A6)**

Products containing abrasive materials such as silica, pumice, etc. may be acceptable based upon review by NSF. All odors or abrasive residue must be removed prior to using the cleaned surface for direct food contact.

**5.2.7 Metal cleaners and polishes for nonfood contact surfaces (Category Code A7)**

Water-based or solvent-based metal cleaners and polishes may be acceptable for use on nonfood contact surfaces for removing and/or preventing corrosion only if they are used in a manner so that all odors associated with the compounds have dissipated before food products or packaging materials are re-exposed in the area. A potable water rinse is not required.

**5.2.8 Degreasers or carbon removers for food cooking or smoking equipment, utensils, or other associated surfaces (Category Code A8)**

These caustic products generally contain cleaning solvents with objectionable odors at levels which are inappropriate for general-purpose use. This category allows use of those required solvents to permit their limited use on food cooking or smoking equipment, utensils, or other associated surfaces. These products must be used in a manner so that all odors associated with their use are dissipated before food products or packaging materials are re-exposed in the area.

**5.2.9 Ingredients for use in cleaners (Category Code AX)**

Chemicals or mixtures may be reviewed for use as ingredients in cleaners. Due to the nature of some ingredients, they may not be acceptable for use in some types of compounds. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.3 Products for Laundry Use**

**5.3.1 Laundry products for fabrics contacting food (Category Code B1)**

Products consisting of soaps, synthetic detergents, alkaline builders, or any combination thereof may be acceptable for laundering shrouds or other fabrics used in the plant which may contact meat or poultry products directly or indirectly, based upon review by NSF. Fluorescent dyes or optical brighteners may also be added if NSF has sufficient information on them to assure their safe use. Sours consisting of acetic acid, sodium bisulfate or other acceptable acidic materials may be acceptable to neutralize excess alkalinity in all laundered fabrics. Chlorine or oxygen bleaches may be acceptable to remove stains or maintain whiteness of all fabrics. In all cases, a potable water rinse sufficient to remove all added substances from the laundered fabric is required. If fragrant ingredients are present in the laundry product, the product shall undergo odor testing performed by NSF International Chemistry Laboratory.

**5.3.2 Laundry products for fabrics not contacting food (Category Code B2)**

In addition to the preparations referred to above, fabric softeners or antistatic agents and starches may be used on uniforms or other fabrics that do not come in direct contact with food products. A perfume or other odorant may be used in these laundry products.

**5.3.3 Ingredients for use in laundry products (Category Code BX)**

Chemicals or mixtures may be reviewed for use as ingredients in laundry products. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.4 Products used in Inedible and Nonprocessing Areas**

This category includes products such as odor control products, air deodorants or sanitizers, cleaning or sanitizing products containing heavy perfume, pine oil, or other similar products containing odorous substances. Products containing isomers of dichlorobenzene or other substances toxic by inhalation may be acceptable upon review of labeling use directions requiring ventilation. Spray and wipe-type products may also be acceptable for use in nonprocessing areas only. These products may be acceptable in areas of food processing facilities where edible products are neither processed nor stored in open containers. This category also covers paint removers and snow and ice melting products intended for use in nonprocessing areas. If products are designed for use on equipment that shall be returned to a processing area, effective cleaning and/or rinsing with potable water is required.

**5.4.1 General (Category Code C1)**

There are no specific additional requirements for this category. Products shall be evaluated on a case-by-case basis.

**5.4.2 Toilet/dressing room (Category Code C2)**

Products designed for use in toilets and dressing rooms may be acceptable based on review by NSF of ingredients and labeling.

**5.4.3 Paint removers (Category Code C3)**

There are no specific additional requirements for this category. Products shall be evaluated on a case-by-case basis.

**5.4.4 Ingredients for use in inedible and nonprocessing areas (Category Code CX)**

Chemicals or mixtures may be reviewed for use as ingredients in inedible and nonprocessing areas. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

## **5.5 Antimicrobial Agents**

Products shall be registered by the EPA for use in food establishments and adequate documentation of that registration, including registered EPA labels, shall be provided to NSF for review.

### **5.5.1 Antimicrobial Agents always requiring a rinse (Category Code D1)**

The products which do not fall under the D2 guidelines listed below may be acceptable for use on hard, non-porous food contact surfaces, such as equipment and utensils, based on review by NSF.

The use of disinfectants on hard non-porous food contact surfaces such as equipment and utensils, must be followed by a potable water rinse. Such solutions must be used in a manner which does not result in the contamination of food products subsequently processed and must be consistent with the directions on the EPA registered label.

### **5.5.2 Antimicrobial Agents not requiring a rinse (Category Code D2)**

Sanitizing solutions may be used on hard non-porous food contact surfaces such as equipment and utensils without a subsequent potable water rinse provided they are formulated in compliance with 40 CFR, Section 180.940, and are registered with the EPA. The sanitizers must be used under the following conditions:

- (a) Such surfaces are thoroughly drained and any collection of liquid removed before contact with food products is made.
- (b) The sanitizing solutions are used in accordance with label directions.

### **5.5.3 Ingredients for use in antimicrobial products (Category Code DX)**

Chemicals or mixtures may be reviewed for use as ingredients in antimicrobial products. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. NSF review and approval is based on the EPA registration. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

## **5.6 Products for Employee Hand Care**

Registration with the FDA OTC Drug Compliance Branch is required if a hand care product is making an antimicrobial claim on the label. Hand care products containing chlorhexidine gluconate must also be registered with the OTC Drug Compliance Branch. Skin care products intended for use as a "barrier" or "shield" to prevent or mitigate human disease by protecting healthy uncompromised skin from exposure to toxic chemicals and/or pathogenic bacteria, including viruses, must also be registered with the OTC Drug Compliance Branch.

### **5.6.1 Handwashing products (Category Code E1)**

Products shall be in liquid form and shall not contain perfumes leaving a residual odor on hands after rinsing. Labeling shall state that employees must rinse hands thoroughly prior to returning to work.

**5.6.2 Handwashing and sanitizing products (Category Code E2)**

Combination detergents-germicides (single step preparations designed to combine hand washing and sanitizing) will be considered for Registration on the basis of their ability to effectively clean the hands as well as their germicidal equivalency to 50 ppm available chlorine. The hands need not be washed with soap or detergent prior to use of such preparations. However, the hands must be rinsed with potable water after the use of the product and before handling food. Products shall be accepted for use in food handling by the U.S. Food and Drug Administration (FDA) OTC Drug Compliance Branch, 5600 Fishers Lane, Rockville, MD 20857, phone: (301) 594-1065.

**5.6.3 Hand sanitizing products (Category Code E3)**

Products manufactured from those solutions described in CFR Title 21, Section 178.1010, which are applicable for the purpose may be used to sanitize the hands of employees handling food products without a subsequent rinse provided they are germicidally equivalent to 50 ppm available chlorine. Products shall not contain perfumes leaving a residual odor on hands after usage. These sanitizing solutions may be used only after thoroughly washing hands with soap or detergent and water, followed by rinsing with potable water. In many instances, these hand sanitizers may be injected directly into wash/rinse water. Other products shall be accepted for use in food handling by the U.S. Food and Drug Administration (FDA) OTC Drug Compliance Branch, 5600 Fishers Lane, Rockville, MD 20857, phone: (301) 594-1065.

**5.6.4 Hand creams, lotions and powders (Category Code E4)**

These products are intended to be used by employees at the end of the workday in bathrooms, dressing rooms and other nonprocessing areas. Labeling shall state that usage is intended for toilets, dressing rooms and nonprocessing areas only.

Powdered or abrasive hand cleaners may also fall into this category. Such cleaners may contain up to 90 percent sodium borate (borax), or other abrasive material, in combination with soaps or detergents and other adjuvants common to such preparations.

**5.6.5 Ingredients for use in hand care products (Category Code EX)**

Chemicals or mixtures may be reviewed for use as ingredients in hand care products. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. NSF review and approval is based on the FDA approval. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.7 Pesticides**

The following general requirements apply to all products listed under Category Codes F1, F2, F3, F4 and F5, unless specifically exempted:

- Products shall be registered by the EPA for use in food establishments and adequate documentation of that registration, including registered labels, shall be provided to NSF for review;
- Granular or powdered products shall be colored a distinct blue or green to distinguish the pesticide from edible substances, unless they are in labeled dispenser containers, or do not have the characteristics of food products (i.e. dry baits which are pressed into distinct cakes or pellets);

- Granular or powdered pesticides such as borax, boric acid, derris or cube root, silica aerogel, and sodium fluoride mixed with inert ingredients such as clay, sugar, or talc, may be acceptable for use for the control of flies, roaches, or other insects in inedible product areas or outside premises under circumstances which absolutely prevent contact with food products.

**5.7.1 Nonresidual pesticides (Category Code F1)**

Contact sprays, space sprays, aerosols, so-called "knockdown" sprays containing pesticides not having residual killing action may be acceptable for use. Nonresidual insecticides such as pyrethrins, pyrethrum extract, and synthetic pyrethroids, may be acceptable for use based on review by NSF. Synergists, such as piperonyl butoxide and n-octyl bicycloheptane dicarboximide (MGK 264), singly or in combination, may be acceptable for use with nonresidual insecticides.

**5.7.2 Residual pesticides (Category Code F2)**

These products are generally restricted to inedible product areas or outside premises where exposed food products are neither processed nor stored in open containers. They may be used in edible product areas for crack and crevice treatment provided applicable directions appear on the EPA registered label. Such use is acceptable provided the pesticide is applied after processing operations have ended, exposed food products and packaging materials are removed or protected, the treated area is ventilated and cleaned thoroughly before processing operations are resumed, and the treated cracks and crevices are sealed. Acceptable insecticides include:

- Acephate
- Diazinon
- Baygon
- Dichlorvos
- Chlorpyrifos
- Propetamphos
- Cyfluthrin
- Residual synthetics

**5.7.3 Rodenticides (Category Code F3)**

These products are typically not allowed to be placed in edible product areas until operations have ceased for the day and all uncovered products have been removed from the area. Rodenticides such as those listed below may be acceptable for use, based on review by NSF:

- 3-(alpha-Acetonylfurfuryl)-4-hydroxycoumarin (Fumarin)
- Brodifacoum
- Bromadiolone
- 2-Isovaleryl-1, 3-indandione (PMP, Valone)
- 2-Isovaleryl-1, 3-indandione, calcium salt
- 2-Pivalyl-1, 3-indandione (Pival)
- 2-Pivalyl-1, 3-indandione, sodium salt (Pivalyn)

- Warfarin [3-alpha-(Acetonylbenzyl)-4-hydroxycoumarin]
- Warfarin, sodium salt

**5.7.4 Fumigants (Category Code F4)**

Hydrocyanic acid gas, methyl bromide gas, or phosphine gas generated from aluminum phosphide may be acceptable for use for the eradication of insects specified on the registered pesticide label. Hydrocyanic acid gas and methyl bromide gas may also be acceptable for the eradication of rodents specified on the registered pesticide label. Uncooked cured hams and bacon, cooked sausage or packaged products need not be removed during use.

**5.7.5 Fumigants (Category Code F5)**

Gases other than those specified under Category Code F4 are acceptable under this category. All edible products and their packaging materials must be removed from the rooms to be fumigated. All food contact surfaces must be rinsed with potable water before products are returned.

**5.7.6 Ingredients for use in pesticides (Category Code FX)**

Chemicals or mixtures may be reviewed for use as ingredients in pesticides. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. NSF review and approval is based on the EPA registration. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.8 Water Treatment Products**

**5.8.1 General water treatment products (Category Code G1)**

Products shall be GRAS (21 CFR, Parts 182 and 184) for the intended use.

**5.8.2 Phosphate water treatment products (Category Code G2)**

Products shall be GRAS 21 CFR, (Parts 182 and 184) for the intended use. The concentration of phosphate in the treatment water, when prepared according to manufacturer's instructions, shall not exceed 10 parts per million (ppm) (0.001%) as phosphate ion.

**5.8.3 Silicate water treatment products (Category Code G3)**

Products shall be GRAS (21 CFR, Parts 182 and 184) for the intended use. The concentration of silicates in the treatment water, when prepared according to manufacturer's instructions, shall not exceed 10 ppm (0.001%) as silicon dioxide.

**5.8.4 Chlorine water treatment products (Category Code G4)**

Products shall be GRAS (21 CFR, Parts 182 and 184) for the intended use. Chlorine used in the system may be derived only from chlorine gas; electrolytically generated hypochlorous acid; or sodium or calcium hypochlorite. The concentration of chlorine in the processing water, when prepared according to manufacturer's instructions, shall not exceed 5 ppm (0.0005%) as available chlorine. The concentration of chlorine in poultry chiller intake and carcass wash waters, when prepared according to manufacturer's instructions, shall not exceed 50 ppm (0.005%). The concentration of chlorine in trimmed or reprocessed poultry waters, when prepared according to manufacturer's instructions, shall not exceed 20 ppm (0.002%). Chlorine dioxide generated by treating

an aqueous solution of sodium chlorite with either chlorine gas or a mixture of sodium hypochlorite and hydrochloric acid may be used as an antimicrobial agent in poultry chiller water only. The additive may not exceed 3 ppm (0.0003%) residual chlorine dioxide (21 CFR, 173.300).

**5.8.5 Cooling and retort water treatment products (Category Code G5)**

There is no specific list of substances that may be used in retort water, washing spray, or cooling water for canned products. Products containing sulfites, borate, and nitrite or nitrate at levels greater than 10 ppm (0.001%) shall be decharacterized according to Section 5.8.8 and/or 5.8.9 below.

**5.8.6 Boiler treatment products (Category Code G6)**

These products are used for treating boiler and steam lines where the steam produced may contact edible products and/or cooling systems where the treated water may not contact edible products. Products shall consist of ingredients that are GRAS (21 CFR Parts 182 and 184) or substances cleared under 21 CFR, Section 173.310 and labeling shall include the directions for use as required under the FFDCA. In situations where products are prepared to custom specifications of individual customers, or it is infeasible to include an ingredient statement and use directions on the container label, the information may be supplied to users in such forms as control charts, technical bulletins, services reports, or other written communications. In those cases, a copy of the supplementary information shall be supplied to NSF. Products containing nitrate, sulfite, bisulfite, or metabisulfite at levels greater than 10 ppm (0.001%) shall be decharacterized according to Section 5.8.8 below.

**5.8.7 Boiler treatment products – no food contact (Category Code G7)**

There is no specific list of substances that may be used to treat water in boilers or steam lines which produce or carry steam for purposes other than direct food contact, or water in cooling systems which indirectly cool food products or substances that may be incorporated into a food product. Examples are water or steam used in a steam-jacketed kettle, or cooling water that passes through a jacketed kettle. Products containing sulfites at levels greater than 10 ppm (0.001%) shall be decharacterized according to Section 5.8.8 below. Products containing borate, and nitrite or nitrate at levels greater than 10 ppm (0.001%) shall be decharacterized according to Section 5.8.9 below. Products containing salts of chromic acid shall not be acceptable.

**5.8.8 Decharacterization of products containing nitrates or sulfites**

To promote handling of products containing nitrate or sulfites, formulations must be adequately decharacterized. The product shall be considered decharacterized if any or all of the following conditions exist:

- The formulation contains a minimum 5% by weight of tannin, lignin, sodium lignosulfate or sodium humate;
- The ratio of NaOH to total nitrate and/or sulfite compounds is a minimum of 1:3 by weight in the formulation;
- The ratio of KOH to total nitrate and/or sulfite compounds is a minimum of 1:2 by weight in the formulation;
- The ratio of Na<sub>3</sub>PO<sub>4</sub> to total nitrate and/or sulfite compounds is a minimum of 1:2 by weight in the formulation;
- The ratio of Na<sub>2</sub>CO<sub>3</sub> to total nitrate and/sulfite compounds is a minimum of 1:1 by weight in the formulation;

- The ratio of  $K_2CO_3$  to total nitrate and/or sulfite compounds is a minimum of 1.3:1 by weight in the formulation.

**5.8.9 Decharacterization of products containing borate, nitrite or nitrate**

Products containing borate, nitrite, nitrate, or any combination thereof shall be decharacterized with a blue or green dye at 2.5% of the borate or nitrate present. If both borate and nitrite are present, the decharacterization shall be based on the concentration of nitrite. If both nitrite and nitrate are present, the decharacterization shall be based on the concentration of nitrite present, including that resulting from the reduction of nitrate.

**5.8.10 Ingredients for use in water treatment products (Category Code GX)**

Chemicals or mixtures may be reviewed for use as ingredients in water treatment products. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.9 Lubricants**

These products are used on food processing equipment as a protective anti-rust film, as release agents on gaskets or seals of tank closures, and as lubricants for machine parts and equipment.

**5.9.1 Lubricants with incidental food contact (Category Code H1)**

Preparations permitted for use as lubricants and anti-rust agents, or as release agents on gaskets or seals of tank closures, where there is possibility of incidental food contact must be formulated in compliance with 21 CFR, Section 178.3570 and other sections referenced therein. The amount used should be the minimum required to accomplish the required technical effect on the equipment so treated. When a product is used as an anti-rust film, it shall be removed by washing or wiping before putting the equipment back into service.

**5.9.2 Lubricants with no food contact (Category Code H2)**

These products are used on equipment and machine parts in locations where there is no possibility of the lubricant or lubricated part contacting edible products. There is not a specific list of substances that may be used as lubricants where there is no possibility of food contact. Most substances generally used for the purpose in industry would be acceptable. Substances that are categorically unacceptable for such use are listed among the substances in Part 5.1 of these guidelines. There may be other substances that are not acceptable because of unfavorable toxicology or other considerations. Therefore, each preparation will be evaluated on its own merit.

**5.9.3 Soluble oils (Category Code H3)**

These products are used to prevent rust on hooks, trolleys and similar equipment. Treated equipment which contacts edible products shall be cleaned by washing or wiping before putting the equipment back into service. Products may be composed of any of the following:

- Edible oils (corn oil, cottonseed oil, soybean oil) complying with 21 CFR, Section 172.860;
- Mineral oil complying with 21 CFR, Section 172.878;
- GRAS substances complying with 21 CFR Parts 182 (multi-purpose only) or 184.

**5.9.4 Ingredients for use in lubricants (Category Code HX-1, HX-2, HX-3)**

Chemicals or mixtures may be reviewed for use as ingredients in lubricants. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

HX-1: Ingredients for use in H1 lubricants (incidental food contact)

HX-2: Ingredients for use in H2 lubricants (nonfood contact)

HX-3: Ingredients for use in H3 lubricants (soluble oils)

**5.10 Heat Transfer Fluids**

These products are used as heat transfer fluids in primary and secondary heating and cooling systems in food processing facilities.

**5.10.1 Heat Transfer Fluids with incidental food contact (Category Code HT1)**

Preparations permitted for use as heat transfer fluids, where there is possibility of incidental food contact must be formulated in compliance with 21 CFR, Section 178.3570 and other sections referenced therein; ingredients may also comply with 21 CFR, Part 172. The amount used should be the minimum required to accomplish the required technical effect on the equipment so treated.

**5.10.2 Heat Transfer Fluids with no food contact (Category Code HT2)**

These products are used on equipment and machine parts in locations where there is no possibility of the heat transfer fluids or the part in contact with the heat transfer fluids contacting edible products. There is not a specific list of substances that may be used as heat transfer fluids where there is no possibility of food contact. Substances that are categorically unacceptable for such use are listed among the substances in Part 5.1 of these guidelines. There may be other substances that are not acceptable because of unfavorable toxicology or other considerations. Therefore, each preparation will be evaluated on its own merit.

**5.10.3 Ingredients for use in heat transfer fluids (Category Code HTX-1, HTX-2)**

Chemicals or mixtures may be reviewed for use as ingredients in heat transfer fluids. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

HTX-1: Ingredients for use in HT1 heat transfer fluids (incidental food contact)

HTX-2: Ingredients for use in HT2 heat transfer fluids (no food contact)

### **5.11 Absorbents or Anti-slip Agents (Category Code J1)**

These products are used for spot application on floors to correct a hazardous condition and are typically composed of clays, diatomaceous earth, or other naturally occurring mineral substances. The following general requirements apply to all such products:

- These compounds must be regularly removed as a part of the routine floor cleaning operation;
- Product shall not promote microbial growth or harbor pests;
- Product shall not cause dusting under use conditions;
- Product shall not cause tracking or other objectionable conditions;
- Products shall not contain perfume or odorous substances.

In meat carcass holding coolers, a thin layer of clean, odorless sawdust may be acceptable for use, provided it is replaced weekly or more often if necessary. Sodium chloride is not considered acceptable for this application.

#### **5.11.1 Ingredients for use in absorbents or anti-slip agents (Category Code JX)**

Chemicals or mixtures may be reviewed for use as ingredients in absorbents or anti-slip agents. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

### **5.12 Solvent Cleaners**

#### **5.12.1 Cleaners and degreasers for use in non-processing areas (Category Code K1)**

These products typically consist of hydrocarbon, chlorinated hydrocarbon, or other water immiscible solvents, which are used to remove oil, wax, resinous materials, or other substances not removable using acidic or alkaline cleaning agents. Their use is limited to nonprocessing areas where there is no possibility of solvent vapors entering a processing area. Food processing equipment or utensils treated with such preparations must be washed with an acceptable detergent solution, and thoroughly rinsed with potable water before returning to a processing area.

#### **5.12.2 Solvents for cleaning electronic instruments (Category Code K2)**

These products typically consist of hydrocarbon, chlorinated hydrocarbon, or other water immiscible solvents, for cleaning electronic instruments that will not tolerate aqueous cleaning solutions. Before using these compounds, food products and packaging materials must be removed from the area or carefully protected. These compounds must be used in a manner so that all odors associated with the compound are dissipated before food products or packaging materials are re-exposed in the area.

#### **5.12.3 Adhesives or glue removers (Category Code K3)**

These products typically consist of hydrocarbon, chlorinated hydrocarbon, or other water immiscible solvents, for removing adhesive or glue from food packaging materials. . Before using these compounds, food products and packaging materials must be removed from the area or carefully protected. After using these compounds, all surfaces must be thoroughly washed with an acceptable detergent solution, and rinsed with potable water. These compounds must be used in a manner so that all odors associated with the

compound are dissipated before food products or packaging materials are re-exposed in the area.

**5.12.4 Ingredients for use in solvent cleaners (Category Code KX)**

Chemicals or mixtures may be reviewed for use as ingredients in solvent cleaners. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.13 Sewer and Drain Treatment Products**

**5.13.1 General sewer/drain cleaners (Category Code L1)**

These products are used to clean sewers and drains and typically consist of strong acids or strong alkalis.

**5.13.2 Bacterial/enzyme drain and sewer treatments (Category Code L2)**

These products are used to clean sewers and drains and contain bacteria or enzymes.

**5.13.2.1 Taxonomy**

Manufacturers of products containing bacterial cultures are required to provide to NSF a taxonomic identification (identification by genus and species) of the cultures. Only defined and characterized strains of viable microorganisms that are not known to cause disease in healthy adult humans will be considered for registration by NSF.

**5.13.2.2 Salmonella**

Analysis for salmonella shall be performed by NSF Microbiology Laboratory staff during the initial formulation and label review of a new application. One method typically used is adapted from Section 4.32 of the "Microbiology Laboratory Guidebook". That publication is available upon request by writing to the following address:

Government Printing Office  
Superintendent of Documents  
P. O. Box 371954  
Pittsburgh, PA 15250-7954  
(FAX) 202-512-2250  
(Order Information) 202-512-1800

The method is the same as that for pre-cooked frozen foods with the following exceptions:

- in paragraph (a), blending is omitted.
- in paragraph (d), only TT broth is used.

**5.13.3 Ingredients for use in sewer and drain treatment products (Category Code LX)**

Chemicals or mixtures may be reviewed for use as ingredients in sewer and drain treatment products. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF

Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.14 Miscellaneous Products Requiring a Letter of Authorized Use (Category Code P1)**

NSF review of these products is based on the intended end use and directions. The applicant shall stipulate the specific end use and directions on the application. These products shall be used in accordance with the conditions set forth in the NSF Letter of Registration. Letters of Registration may be submitted to the relevant FSIS inspector for review. Ion-exchange resins accepted under this category may be used in the treatment of process water provided they are formulated and used in compliance with 21 CFR Section 173.25 of the food additives regulations.

**5.14.1 Ingredients for use in miscellaneous products (Category Code PX)**

Chemicals or mixtures may be reviewed for use as ingredients in miscellaneous products. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.15 Shell Egg Products**

These products are used to wash and destain shell eggs or may act as foam control agents in egg wash waters. These products should consist of substances regulated for any purpose as food additives in 21 CFR, Parts 172-186. They may be used up to the maximum allowable concentration permitted by the food additive regulations. Dyes and pigments regulated as color additives for use in food may also be acceptable provided they are used at levels not to exceed that specified in the color additive regulations. Shell eggs are generally not allowed to stand or soak in water, so immersion-type washers are not permitted by FSIS inspectors. References to a warm potable water rinse, with or without an EPA registered sanitizer, apply only to eggs that are to be packaged for marketing in shell form. Shell eggs to be broken for immediate use in the manufacture of egg products are exempt from the requirement for using warm water in rinsing and/or sanitizing, as applicable.

**5.15.1 Shell egg cleaning products (Category Code Q1)**

A warm potable water spray rinse containing an EPA registered sanitizer is required after usage.

**5.15.2 Shell egg destaining products (Category Code Q2)**

Labeling shall state that the total time of the shell eggs in the destainer solution may not exceed 5 minutes. Shell eggs must be rewashed and spray rinsed with warm potable water containing an EPA registered sanitizer. Destaining is permitted only after initial washing of the shell eggs is completed.

**5.15.3 Shell egg sanitizing products – QAC (Category Code Q3)**

These products shall be quaternary ammonium chloride compounds that are incorporated in a warm potable water spray rinse for use in sanitizing clean or freshly washed eggs. Products shall be registered by the EPA for use in food establishments and adequate documentation of that registration, including registered labels, shall be provided to NSF for review. Shell eggs that have been sanitized with these products shall be subjected to a

thorough potable water rinse only if they are immediately broken for use in the manufacture of egg or egg containing products.

(1) An aqueous solution containing n-alkyl (C<sub>12</sub>-C<sub>18</sub>) benzyldimethylammonium chloride compounds having average molecular weights of 351 to 380. The alkyl groups consist principally of groups with 12 to 16 carbon atoms and contain not more than 1 percent each of groups with 8 and 10 carbon atoms.

Additionally, the aqueous solution may contain either ethyl alcohol or isopropyl alcohol as an optional ingredient. The solution will provide, when ready to use, not more than 200 parts per million of the active quaternary compound.

(2) An aqueous solution containing equal amounts of n-alkyl (C<sub>12</sub>-C<sub>18</sub>) benzyldimethylammonium chloride and n-alkyl (C<sub>12</sub>-C<sub>18</sub>) dimethyl ethylbenzylammonium chloride (having an average molecular weight of 384). The solution will provide, when ready to use, not more than 200 parts per million of the active quaternary compound.

(3) An aqueous solution containing equal amounts of n-alkyl (C<sub>12</sub>-C<sub>18</sub>) benzyldimethylammonium chloride and n-alkyl (C<sub>12</sub>-C<sub>14</sub>) dimethyl ethylbenzylammonium chloride (having average molecular weights of 377 to 384), with the optional adjuvant substances tetrasodium ethylenediaminetetraacetate and/or alpha – (p-nonylphenyl) – omega-hydroxypoly (oxyethylene) having an average poly- (oxyethylene) content of 11 moles. Alpha-hydro-omega- hydroxypoly-(oxyethylene) poly (oxypropylene) (15 to 18 mole minimum) poly (oxyethylene) block copolymer, having a minimum weight of 1,900 (CAS Registry No. 9003-11-6) may be used in lieu of alpha-(p-nonylphenyl)-omega-hydroxypoly (oxyethylene) having an average poly- (oxyethylene) content of 11 moles. The solution will provide, when ready to use, not more than 200 parts per million of active quaternary compound.

#### **5.15.4 Shell egg sanitizing products – chlorine (Category Code Q4)**

These products shall be chlorine compounds that are incorporated in a warm potable water spray rinse for use in sanitizing clean or freshly washed eggs. Products shall be registered by the EPA for use in food establishments and adequate documentation of that registration, including registered labels, shall be provided to NSF for review. Shell eggs that have been sanitized with these products may be broken for use in the manufacture of egg products without a prior potable water rinse.

(1) An aqueous solution containing potassium, sodium, or calcium hypochlorite, with or without the bromides of potassium, sodium, or calcium. The solution will provide not more than 200 parts per million of available halogen determined as available chlorine.

(2) An aqueous solution containing dichloroisocyanuric acid, trichloroisocyanuric acid or the sodium or potassium salts of these acids, with or without the bromides of potassium, sodium, or calcium. The solution will provide not more than 100 parts per million of available halogen determined as available chlorine.

#### **5.15.5 Foam control products (Category Code Q5)**

These products are typically used to control foam in egg washing machines. Shell eggs washed in water containing this product type shall be immediately rinsed with warm potable water containing an EPA registered sanitizer.

**5.15.6 Shell egg sanitizing products – iodine (Category Code Q6)**

These products are iodine based and are typically incorporated in a warm potable water spray rinse for use in sanitizing clean or freshly washed shell eggs. For freshly washed eggs, a rinse with warm potable water is required prior to application of the compound. A subsequent rinse is not required. Products shall be registered by the EPA for use in food establishments and adequate documentation of that registration, including registered labels, shall be provided to NSF for review.

**5.15.7 Ingredients for use in shell egg products (Category Code QX)**

Chemicals or mixtures may be reviewed for use as ingredients in shell egg products. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

**5.16 Coatings and Paints**

**5.16.1 Coatings for use on food contact surfaces used in processing, transporting or holding food products (Category Code R1)**

These coatings are typically used on food contact surfaces such as parts of machinery or equipment where meat or poultry would be in repeated or continuous contact. Coatings shall be formulated in compliance with 21 CFR, Section 175.300.

**5.16.2 Coatings for use on structural surfaces with no food contact (Category Code R2)**

Coatings for use on structural surfaces such as floors, walls, and ceilings where there is no food contact need not be formulated in strict compliance with FDA regulations. The coatings must be applied in a manner that prevents direct or indirect contamination of edible products. The outermost coating must not contain regulated heavy metals as direct additives, (with the exception of chromic oxide because it is water insoluble). The outermost coating must not contain other leachable toxic substances.

**5.16.3 Ingredients for use in coatings (Category Code RX-1, RX-2)**

Chemicals or mixtures may be reviewed for use as ingredients in coatings. Due to the nature of some ingredients, they may not be acceptable for use in some types of products. The limitations associated with the NSF Registered ingredient can be found within the NSF Registration letter. Formulations containing NSF Registered ingredients are not considered NSF Registered products. A separate application is required for each final product. Formulators using NSF Registered ingredients need only identify the trade name, NSF Registration number, and concentration within the finished product on the application form.

RX-1: Ingredients for use in R1 coatings (food contact)

RX-2: Ingredients for use in R2 coatings (no food contact)

**ATTACHMENT A – SAMPLE REGISTRATION LETTERS**



Nonfood Compounds  
Program Listed

Date

Company Contact

Company Name

Address

Address

RE: Product Name

Category Code: H1

NSF Registration No. 000000

Dear Company Contact:

NSF has processed the application for Registration of **Product Name** to *the NSF Registration Guidelines for Proprietary Substances and Nonfood Compounds (2007)*, which are available at <http://www.nsf.org/>. The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements including FDA 21 CFR, for appropriate use, ingredient review and labeling verification.

**This product is acceptable as a lubricant with incidental food contact (H1) for use in and around food processing areas. Such compounds may be used on food processing equipment as a protective anti-rust film, as a release agent on gaskets or seals of tank closures, and as a lubricant for machine parts and equipment in locations in which there is a potential exposure of the lubricated part to food. The amount used should be the minimum required to accomplish the desired technical effect on the equipment. If used as an anti-rust film, the compound must be removed from the equipment surface by washing or wiping, as required to leave the surface effectively free of any substance, which could be transferred to food being processed.**

NSF Registration of this product is current when the NSF Registration Number, Category Code, and Registration Mark appear on the NSF-approved product label, *and* the registered product name is included in the current NSF White Book Listing of Nonfood Compounds at the NSF website (<http://www.nsf.org/>). The NSF Registration Mark can be downloaded from the NSF website, at [http://www.nsf.org/mark/download\\_marks.html](http://www.nsf.org/mark/download_marks.html). NSF Listing of all registered Nonfood compounds by NSF International is not an endorsement of those compounds, or of any performance or efficacy claims made by the manufacturer.

NSF Listing of all registered Nonfood Compounds by NSF International is not an endorsement of those compounds, or of any performance or efficacy claims made by the manufacturer.

Registration status may be verified at any time via the NSF website, at <http://www.nsf.org/>. Changes in the formulation or label, without prior written consent of NSF, will void registration, and will supersede the on-line listing.

Sincerely,

Jennifer De France

NSF Nonfood Compounds Registration and Listing Program

Company No. XXXXX

**ATTACHMENT B - SAMPLE LABEL**

# Product Name

## Company Name



Nonfood Compounds  
Program Listed (Category Code)  
(Registration #)

### Label Requirements:

- Product Name
- Company Name
- NSF Registration Mark
- Category Code
- Registration Number (shall be added after the product has been Registered)
- Category specific requirements

### Additional label information:

- The label with the Registration Mark, Category Code(s) and Registration Number (designated by XXXXXX) shall be submitted to NSF for approval prior to Registration.
- The Registration Number is provided at the time of successful Registration.
- Mock-Up labels are acceptable for review.
- For guidelines on the size, color and location of the registration mark, please see the "Guide for Using the NSF Mark" found at [http://www.nsf.org/business/about\\_NSF/nsf\\_marks.asp](http://www.nsf.org/business/about_NSF/nsf_marks.asp). Specific questions can be sent to the Registration Project Manager at [nonfood@nsf.org](mailto:nonfood@nsf.org).
- Additional label requirements for categories 3A, 3B, 3C, 3D, 4A, 4B, 4C, 4D, C1, C2, C3, D1, D2, E1, E4, F2, F4, G6, L2, Q2 can be found in the Registration Guidelines.
- The new version of the Registration Mark (as shown on page 15, Figure 1 and above) shall be implemented during maintenance, repair, or replacement of marking equipment, or when new product labels, data sheets or other literature are printed. This policy shall go into effect for all existing registered products and new products submitted for registration, as of **February 1, 2008**.