BACKGROUND:

Acme-Hardesty has been in business for more than 70 years. Since 1942, we have been supplying oleochemicals, castor oil and derivatives, preservatives and market-focused products. We are one of the largest importers, marketers and value-added resellers of oleochemicals and castor oil products in the United States. In 1980, Acme-Hardesty pioneered the Green Revolution by importing and reselling bulk and packaged palm-based oleochemicals from Malaysia and Indonesia. Our global supply partners are world-class companies who manufacture quality products based on sustainable and naturally sourced feedstocks.

Acme-Hardesty continues to add new products to service our key markets. We focus our sourcing efforts on green, natural, bio-based, renewable, sustainable and RSPO MB products to meet our customers’ needs. Our customers range from small LTL companies to Fortune 100 multi-nationals.

Our parent company, Jacob Stern & Sons, Inc., has been in business for nearly 160 years and continues to be managed by descendants of the founding family. Jacob Stern & Sons is one of the largest processors, marketers and exporters of tallow in the world.

Acme-Hardesty has a long history of providing superior service to our customers.

Key Markets Served:
- Animal Feed
- CASE
- Cosmetics
- Flavor & Fragrance
- Food & Beverage
- Green, Natural, Sustainable
- Lubricants & Greases
- Metal Working Fluids
- Oil & Gas
- Personal Care
- Pet Care
- Pharmaceutical & Nutraceutical
- Plastics & Rubber
- Polyurethane
- Soaps & Detergents
- Textiles
- Waxes

Key Products:

Fatty Acids (Vegetable & Tallow):
- Caprylic, Capric, Lauric, Myristic, Palmitic, Oleic, Coconut Fatty Acid, Behenic Acid
- Azelaic Acid, (New)
- Pelargonic Acid (New)
- Isostearic Acid (New)

Glycerine 99.7% USP Kosher

ACHOHOLS® Fatty Alcohols:
- Octyl (0898), Decyl (1098), Lauryl (1299), Lauryl-Myristyl (1216), Myristyl (1498), Cetyl (1698), Cetearyl (1618), Stearyl (1898)

Castor Oil & Derivatives:
- 12 Hydroxy Stearic Acid, Methyl 12 Hydroxy Stearate, Castor Wax, Hydrogenated Castor Oil, Dried Castor Oil, Ricinoleic Acid, Sebacic Acid, 2-Octanol, AcmeWax

Ethyen Bis Stearamide (EBS)

Palm Methyl Esters:
- Methyl Laurate (1214), Methyl Laurate Stearate (1218), Methyl Palmitate-Stearate (1618), Methyl Oleate (1898)

Esters:
- Isopropyl Myristate, Isopropyl Palmitate, Butyl Stearate, MCT, Triacetin

Specialty Esters for Personal Care/Cosmetics & Lubes & Metalworking (New)

Polyurethane Products:
- Natural Oil Polyols (NOP)
- Amine Catalysts
- Bio Based PEGS

Metallic Stearates:
- Aluminum, Calcium, Magnesium, Zinc

Preservatives:
- Parabens, Phenoxethanol, DMDMH; Paraben Free, Formaldehyde Free and Halogen Free Blends;
- Biomix & Biosecur Natural Preservatives
- SharotSENSE (Natural-Like)
ACME-HARDESTY PRODUCT LIST: OLEOCHEMICALS

Oleic Acid (Vegetable & Tallow)
Oleic Acid 100 (Tallow Based)
Oleic Acid 105 (Tallow Based)
Oleic Acid 120 (Tallow Based)
Oleic Acid FGK (Palm Based) (MB)

Stearic Acid (Vegetable & Tallow)
Stearic Acid 50 NF Powder (MB)
Stearic Acid 55%, 65%, 70%, 90% (MB)
Rubber Grade Stearic Acid (RGSA) (MB)
Triple Pressed Stearic Acid (TPSA) (MB)

Fractionated Fatty Acids
Caprylic Acid (C8) (MB)
Capric Acid (C10) (MB)
Caprylic/Capric Acid (C810) (MB)
Lauric Acid (C12) (MB)
Myristic Acid (C14) (MB)
Palmitic Acid (C16) (MB)
Stearic Acid (C18) (MB)
Behenic Acid 85% (C22)**
** Inquire for Availability
(MB) Available as RSPO Mass Balance

Specialty Fatty Acids
Azelaic Acid (Matrixiol LA001M) (New)
Pelargonic Acid (Matrixiol IP001M) (New)
Isostearic Acid

Distilled Fatty Acids
Coconut Fatty Acid (MB)
Palm Kernel Fatty Acid (MB)
Tallow Fatty Acid

Hydrogenated Fatty Acids
Hydrogenated Tallow Fatty Acid (HTFA)

Hydrogenated Glyceride
Hydrogenated Lard Glyceride
Hydrogenated Soybean Glyceride
Hydrogenated Tallow Glyceride

Glycerine
Glycerine 99.7% USP & Kosher* (MB)
Glycerine 99.7% USP & Kosher (Biodiesel)
*Ask us for our complete list of certifications
**FPA-SAFE Supplier for Fatty Acids & Glycerine
(MB) Available as RSPO Mass Balance

AHCOHOL® Fatty Alcohols (MB)
AHCOHOL 0898 (Octyl Alcohol)**
AHCOHOL 0810 (Octyl Decyl Alcohol)**
AHCOHOL 1098 (Decyl Alcohol)**
AHCOHOL 1299 (Lauryl Alcohol)
AHCOHOL 1216 (Lauryl/Myristyl Alcohol)
AHCOHOL 1498 (Mystryl Alcohol NF)**
AHCOHOL 1698 (Cetyl Alcohol NF)
AHCOHOL 1618 (Cetyl Steary/Cheteryl Alcohol)
AHCOHOL 1898 (Stearyl Alcohol NF)
** Inquire for Availability
(MB) Available as RSPO Mass Balance

Fractionated Palm Methyl Esters (MB)
PME 1214 (Methyl Laurate Myristate)**
PME 1218 (Methyl Laurate Stearate)**
PME 1298 (Methyl Laurate)
PME 1618 (Methyl Palmitate-Stearate – DPK)**
PME 1618 (Methyl Palmitate Oleate)**
PME 1698 (Methyl Palmitate)**
PME 1898 (Methyl Oleate – PK)**
** Inquire for Availability
Available Grades:
DPK: Distilled Palm Kernel
PS: Palm Sterine
(MB) Available as RSPO Mass Balance

The palm oil and PKO-based products are available as RSPO Mass Balance.
Specific products are available in Food Grade, USP, NF, Halal and Kosher-Certified Grades
Our Palm-Based Oleochemicals & Glycerine are RSPO MB, Non GMO and FPA SAFE

Ask about our new USDA BioPreferred Products
Decades of Quality Products & Services

CASTOR OIL PRODUCTS & POLYURETHANE ADDITIVES

**Castor Oil & Derivatives**
- #1 Castor Oil
- 12-Hydroxy Stearic Acid (12-HSA)
- AcmeWax 225 (12-HSA Ester)
- AcmeWax 224 (Ricinoleic Acid Ester)
- AcmeWax TGA (12-HSA Ester)
- Methyl 12 Hydroxy Stearate
- Dehydrated Castor Oil
- Dehydrated Castor Oil Fatty Acid
- Deodorized Castor Oil
- Dried Castor Oil (SD & SD Low AV)
- Hydrogenated Castor Oil (HCO)
- Neutralized Castor Oil (Low AV)
- Pale Pressed Castor Oil (PPCO)
- Ricinoleic Acid
- USP Castor Oil

**Castor Wax – Stick Grade**
- 70 Degree Melt Point (MP 70)
- 80 Degree Melt Point (MP 80)
- 90 Degree Melt Point (MP 90) (HCO)

**Sebacic Acid & Derivatives**
- Sebacic Acid
- Dibutyl Sebacate (DBS)**
- Diocyl Sebacate (DOS)**
- 2-Octanol
- 2-Octanone

**Natural Oil Polyols (NEW)**
- VerOH Prime
- VerOH Free
- VerOH Lite
- VerOH Plus
- VerOH Pure
- EcOH X (Antioxidant Blend)**
- EcOH XV (Visco Foam Blend)**
- PolyGreen F6037 (New)
- PolyGreen F7020 (New)

**Bio-Based Polyethylene Glycols** (New)
- PEG 200………..(PEG-4)
- PEG 300………..(PEG-6)
- PEG 400………..(PEG-8)
- PEG 600………..(PEG-12)
- PEG 1000………..(PEG-20)
- PEG 1500………..(PEG-32)
- PEG 3350………..(PEG-75)
- PEG 4000………..(PEG-90)
- PEG 6000………..(PEG-1500)

**FENTACAT Polyurethane Amine Catalyst (Solvay)** (New)
- Traditional Catalysts
- FENTACAT 5 (R/F) – PMDETA
- FENTACAT 8 (R) – DMCHA
- FENTACAT B12 (R) – BDMA
- FENTACAT D89 (R/F) – DMEA
- FENTACAT F33 (R/F) – 33% TEDA
- FENTACAT F99 (R/F) – 99% BDMAEE
- FENTACAT F1 (R/F) – 70% BDMAEE
- FENTACAT 50 (F)
- Low Emissive Catalysts
- FENTACAT 11 (R/F) – DPA
- FENTACAT 14 (R/F) – TMAEEA
- FENTACAT 15 (R) – bis DMAPA
- FENTACAT 9 (R/F) – bis DMAPA
- FENTACAT 13 (F) – DMAEE
- FENTACAT 10 (R/F)
- Trimerization Catalysts
- FENTACAT 41 (R) – DMAPA Triazine
- FENTACAT M-2 (R)

R = Rigid
F = Flexible

**Bio-Logical.**

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Ask about our new USDA BioPreferred Products
PERFORMANCE ADDITIVES / LUBES, GREASE, METAL WORKING FLUIDS / INDUSTRIAL

Temix Oleo Specialty Esters**

TMP TO (Trimethylol Propane Esters)
- Temest H65V
- Temest H65S

2 Ethylhexyl Palmitate
- Temest 2 EHP

2 Ethylhexyl Oleate
- Temest J65

PT TO (Pentaerythrityl Esters)
- Temest G65
- Temest 6505

GTO (Glyceryl Trioleate)
- Temest N85

Adipate esters
- Temest L05
- Temest M05

Trimellitate Esters
- Temest J100
- Glylub 23
- Glylub 33
- Glylub 13
- Glylub 43

** Inquire for Availability
Visit TemixOleo (http://www.temixoleo.com/esters_lub_ww.html) to see the Full Ester product Line.

Metallic Stearates (Vegetable & Tallow)
- Aluminum Stearate
- Calcium Stearate
- Magnesium Stearate
- Zinc Stearate

Kosher and USP/NF grades available

Jenkinol® Plastic Additives & Lubricants
- Jenkinol L 230
- Jenkinol 680 ESO (Epoxidized Soybean Oil)

EBS – Ethylene Bis Stearamide (Palm Based)
- EBS SF (Super Fine)
- EBS SP (Powder)
- EBS Beads
- EBS Prill (Tallow)

Miscellaneous
- Epoxidized Soybean Oil (ESO)
- Azelaic Acid (Matrixol LA001M) (New)
- Pelargonic Acid (Matrixol IP001M) (New)
- Sebacic Acid & Derivatives
- Isostearic Acid

Jenkinol Plastic Additives & Lubricants

Jenkinol L 230
Jenkinol 680 ESO (Epoxidized Soybean Oil)

EBS – Ethylene Bis Stearamide (Palm Based)
- EBS SF (Super Fine)
- EBS SP (Powder)
- EBS Beads
- EBS Prill (Tallow)

Miscellaneous
- Epoxidized Soybean Oil (ESO)
- Azelaic Acid (Matrixol LA001M) (New)
- Pelargonic Acid (Matrixol IP001M) (New)
- Sebacic Acid & Derivatives
- Isostearic Acid

The palm oil and PKO-based products are available as RSPO Mass Balance. Specific products are available in Food Grade, USP, NF, Halal and Kosher-Certified Grades. Our Palm-Based Oleochemicals & Glycerine are RSPO MB, Non GMO and FPA SAFE.

Ask about our new USDA BioPreferred Products
DECades of Quality Products & Services

PERSONAL CARE/COSMETICS

Preservatives (Sharon Laboratories)
- Butyl Paraben
- Ethyl Paraben
- Methyl Paraben
- Propyl Paraben
- Sodium Methyl Paraben
- DMDMH
- Phenoxyethanol
- Phenochem* (Phenonip*)
- Sharomix 824 (no Butyl Parabens)

Sharomix;
(Broad Spectrum & Focused Protection Systems)
- Sharomix MCI II (Kathon CG*)
- Sharomix DMP & DMP II (Germaben*)
- Sharomix EG-14 (Euxyl PE-9010)**
  ** Inquire for Availability

Sharomix
Organic Acid Blends (700 Series)
- (Paraben-free, Formaldehyde-free & Halogen-free blends)**
  ** Inquire for Availability

Sharomix; Advanced Line
Innovative Blends
- Non-pH dependent blends incorporating Caprylic Glycol,
  1,2-Hexanediol and Chlorophenesin

SharoMax;
The “Free of” Preservative Line
(Phenoxyethanol-Free, Globally Acceptable)

SharoSENSE; (New)
Natural-Like Solutions
- Broad Spectrum / Non-pH Dependent Natural Preservatives

Sharon Biomix & Biosecur
("All natural" broad spectrum preservatives
  based on organic citrus extracts)

Contact us for our Innovative Preservative Solutions to meet your formulation needs. Visit Sharon Labs website for full offerings:
  http://www.sharonlabs.com/en/Products

Surfactants
- Cocamidopropyl Amine Oxide**
- Cocamidopropyl Betaine (CAPB)
- Disodium Laureth Sulfosuccinate**
- Disodium Lauryl Sulfosuccinate**
- Lauryl Alcohol Ethoxylates (2, 3 & 4 Mole)
- Lauryl Amine Oxide (LAO)
- Sodium Coco Sulfate (SCS) 95%
- Sodium Lauryl Ether Sulfate (SLES) 70%***
- Sodium Lauryl Sulfate (SLS) 28% Solution
- Sodium Lauryl Sulfate (SLS) 90% Needles
- Sodium Lauryl Sulfate (SLS) 95% Needles
- Sodium Lauryl Sulfate (SLS) 95% Granular NF

Surfactants (Inquire about other products)
  ** Inquire for Availability
  *** Low 1, 4 Dioxane (<13 ppm)

Esters (Specialty) (KLK Oleo)
- Butyl Stearate
- IPM (Isopropyl Myristate)
- IPO (Isopropyl Oleate)**
- IPP (Isopropyl Palmitate)
- MCT (Medium Chain Triglyceride)
- Octyl Palmitate (2-Ethyl Hexyl Palmitate)
- 2-Ethyl Hexyl Stearate**
  ** Inquire for Availability

Temix Oleo Specialty Esters** (New)
- Temest ALB; (C12 15 Alkyl Benzoate)
- Temest 2 EHS; (Ethylhexyl Stearate)
- Temest 2 EHC; (Ethylhexyl Ccoate)
- Temest 2 EHP; (Ethylhexyl Palmitate)
- Temest 99; (Isononyl Isononanoate)
- Temest DO; (Decyl Oleate)
- Temest CTN; (Cetearyl Isononanoate)
- Temest CTE; (Cetearyl Ethylhexanoate)
- Temest 810; (Caprylic/Capric Triglyceride)
  ** Inquire for Availability

Visit TemixOleo http://www.temixoleo.com/esters_cos_ww.html
to see the Full Ester product Line.

Miscellaneous
- Ecomyx* (Natural replacement for plastic beads)

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Ask about our new USDA BioPreferred Products

Bio.Logical.

Acme-Hardesty
450 Sentry Parkway, Blue Bell, PA 19422
(800) 223-7054

Customer Service:
ahcsc@acme-hardesty.com
(800) 223-7054

www.acme-hardesty.com
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The palm oil and PKO-based products are available as RSPO Mass Balance. Inquire for pricing.

Prices are subject to change without advance notice.