











OleoBasics

OLEOCHEMICALS FOR BASIC TO NICHE APPLICATIONS





YOUR SOLUTIONS PARTNER IN NATURAL-BASED CHEMICALS

Emery Oleochemicals is known for world-leading, in-depth technical expertise and the production of high-quality specialty chemicals. We provide our customers with best-in-class sustainable solutions recognized for their ability to deliver outstanding technical performance.

LEADING THE INDUSTRY WITH NATURAL-BASED PRODUCTS

Founded in 1840, Emery Oleochemicals has a rich history developing and manufacturing natural-based chemicals made predominantly from natural oils and fats. Emery Oleochemicals' philosophy of 'Creating Value' for our customers is evident through our wide-ranging product portfolio that caters to the diverse and unique needs of an evolving marketplace.

RECOGNIZED BRANDS: EMERY® AND EMERSOL®

Our OleoBasics products are made entirely from natural oils and fats derived from renewable raw materials. Through our EMERY® and EMERSOL® product portfolios, we produce an extensive range of stearic, oleic, tallow and vegetable fatty acids, refined glycerin and other natural oils and fats that form the basic building blocks of the chemical industry and are used in automotive, rubber, paper and lubricant applications, among others.

To ensure that our customers receive a consistent and high-quality product, Emery Oleochemicals conforms to the international standards of ISO 9001 and ISO 14001 governing quality and environmental protection.

Emery Oleochemicals'
OleoBasics products are GMO-free.



www.emeryoleo.com/oleobasics









CONTENT

STEARIC ACID 04
OLEIC ACID 06
TALLOW FATTY ACID 08
VEGETABLE FATTY ACID 10
REFINED GLYCERIN 12











EMERSOL® and EMERY® stearic acids are mainly used as lubricants, softening and release agents as well as in the production of soaps, cleaning chemicals and chemical intermediates. These natural-based solutions are manufactured using our extensive knowledge accumulated over our company's 180 year history of developing sustainable oleochemicals for a wide range of industries.

| PRODUCT | DESCRIPTION | ACID VALUE | IODINE VALUE | TITER °C | COLOR % TRANS. NM. | | CHAIN DISTRIBUTION % | | | | | | |
|-----------------|---------------------------------------|---------------|-----------------|-------------|-----------------------|--------|----------------------|---------|-------|-------|-------|-------|--|
| | | mgKOH/g | | | 440 | 550 | C 12 | CI4 | C16 | C18 | C18' | >C18 | |
| EMERSOL® 120 | Double-Pressed Tallow Stearic Acid | 205-210 | 5-7 | 53.7-54.7 | 88 min | 99 min | ≤ 0.5 | 2.6-3 | 38-44 | 43-48 | 4-6 | | |
| EMERSOL® 132 NF | Triple-Pressed Tallow Stearic Acid | 205-211 | 0.5 max | 54.5-55.5 | 93 min | | | 2.2-3 | ≥ 40 | 40-60 | ≤ 0.3 | ≤ 0.7 | |
| EMERY® 400 | Rubber Grade Tallow Stearic Acid | 193-212 | 10 max | 52-65 | 35 min | 40 min | ≤ 0.1 | 2.5-3.5 | 27-38 | 54-64 | ≤ 5 | ≤ | |
| EMERY® 405 | Hydrogenated Tallow Stearic Acid | 195-209 | 6 max | 57-100 | | 40 min | | ≤ 2 | ≤ 30 | ≤ 60 | ≤ 4 | | |
| EMERY® 410 | Hydrogenated Tallow Stearic Acid | 195-209 | I 2 max | 56.1-63 | 40 min | 86 min | | 2 | 26 | 64 | 3.5 | | |
| EMERY® 420 | Hydrogenated Tallow Stearic Acid | 200-207 | I max | 57.2-63 | 85 min | 98 min | ≤ 0.2 | 2.8-3.5 | 26-33 | 58-65 | ≤ | ≤ 1.2 | |
| EMERY® 422 | Hydrogenated Tallow Stearic Acid | 203-209 | I max | 55.8-60 | 90 min | 99 min | ≤ 0.1 | 2.7-3 | 36-40 | 52-57 | | ≤ | |







Applications for oleic acid include, but are not limited to, industrial lubricants, liquid soaps and metalworking fluids. EMERSOL® oleic acids are also used in the production of esters, surfactants, amines and alkoxylates.

| PRODUCT DESCRIPTION | | ACID VALUE | IODINE VALUE | TITER °C | COLOR % TRANS. NM. | | CHAIN DISTRIBUTION % | | | | | | | | |
|---------------------|---|---------------|-----------------|-------------|-----------------------|--------|-----------------------|---------|---------|-------|-------|-------|--------|-------|--|
| | | mgKOH/g | | | 440 | 550 | C 12 | C14 | C16 | C18 | C18' | C18" | C18''' | >C18 | |
| EMERSOL® 213 NF | Tallow Oleic Acid | 199-204 | 88-95 | 5 max | 56 min | 86 min | ≤ 0.3 | 2.5-3.6 | 4.2-5.2 | ≤ 1.3 | 68-72 | 6-11 | ≤ 0.5 | ≤ 1.2 | |
| EMERSOL® 221 NF | Tallow Oleic Acid | 199-204 | 88-95 | 5 max | 77 min | 98 min | ≤ 0.2 | 2.5-3.4 | 4.2-5.4 | ≤ 1.2 | 68-73 | 7-10 | ≤ 0.7 | ≤ | |
| EMERSOL® 233 LL | Low Linoleic Content Tallow Oleic Acid | 200-204 | 85-90 | 6 max | 78 min | 97 min | ≤ 0.2 | 3.5-4.3 | 3.7-4.0 | ≤ | 71-74 | 3.5-5 | ≤ 0.2 | ≤ | |









EMERY® tallow fatty acids are used in a variety of industries such as oilfield chemicals, alkyd resins, industrial and institutional cleaners, construction chemicals, metallic soaps, metalworking fluids, textile chemicals, buffing compounds, and rubber chemicals.

| PRODUCT DESCRIPTION | | ACID VALUE | IODINE VALUE | TITER °C | COLOR % TRANS. NM. | | CHAIN DISTRIBUTION % | | | | | | | | |
|---------------------|---|---------------|-----------------|-------------|-----------------------|--------|-------------------------|---------|-------|-------|-------|-------|--------|-------|--|
| | | mgKOH/g | | | 440 | 550 | C 12 | C14 | C16 | C18 | C18' | C18" | C18''' | >C18 | |
| EMERY® 401 | Partially Hydrogenated Tallow Fatty Acid | 200-208 | 37-45 | 44-50 | 80 min | 93 min | ≤ 0.2 | 2.6-3.6 | 23-26 | 23-28 | 34-37 | ≤ 0.5 | ≤ 0.5 | ≤ 0.2 | |
| EMERY® 53 I | Tallow Fatty Acid | 200-208 | 45-70 | 36-44 | 19 min | 81 min | ≤ 0.2 | 2.5-3.0 | 20-27 | 17-23 | 33-43 | 2-4 | ≤ 0.2 | ≤ 0.2 | |
| EMERY® 534 | Tallow Fatty Acid | 202-208 | 45-60 | 40-44 | 3 G* max | | ≤ 0.2 | 2.5-3.5 | 20-27 | 16-21 | 40-46 | 2-6 | ≤ 0.2 | ≤ 0.5 | |
| EMERY® 536 | Tallow Fatty Acid | 204-208 | 52 max | 40.5 min | 80 min | 95 min | ≤ 0.2 | 2.0-4.0 | 23-28 | 16-23 | 32-42 | 2-5 | ≤ 0.2 | ≤ 0.2 | |

* Color Gardner





Vegetable fatty acid is a broad term for derivatives from plant and vegetable sources. Emery Oleochemicals' OleoBasics business unit offers vegetable-based fatty acids including vegetable stearic acid. EMERY* vegetable fatty acids are used in a variety of personal care products and industrial applications.

| PRODUCT DESCRIPTION | | ACID VALUE mgKOH/g IODINE VALUE | | °C C | COLOR % TRANS. NM. min | | CHAIN DISTRIBUTION % | | | | | | | | | | |
|---------------------|-----------------------------|---------------------------------|----------|---------|------------------------------|-----|----------------------|------|-----|-------|-------|-------|-------|------|------|--------|-------|
| | | AA | JOI | | 440 | 550 | C6 | C8 | C10 | C12 | C14 | C16 | C18 | C18' | C18" | C18''' | >C18 |
| EMERY® 7130 | Vegetable Stearic Acid | 205-211 | 0-0.5 | 54.5-57 | 50 | 95 | | | | | | 51-57 | 41-47 | | | | |
| EMERY® 7132 | Vegetable Stearic Acid | 203-210 | 1.0 | 54-60 | 90 | 98 | | | | | | 40-49 | 51-60 | | | | |
| EMERY® 622 | Vegetable Fatty Acid | 268-276 | 10.0 max | 22-26 | 65 | 96 | ≤ | 2-10 | 4-8 | 45-53 | 17-21 | 7-13 | ≤ 3 | 3-9 | ≤ 2 | | ≤ 0.5 |
| EMERY® 626 | Hydrogenated Fatty Acid | 268-276 | I.0 max | 23-26 | 85 | | ≤ | 2-10 | 4-8 | 45-55 | 17-21 | 7-13 | 7-14 | | | | ≤ 0.5 |
| EMERY® 610 | Soybean Oil Fatty Acid | 197-205 | 125-145 | 17-26 | 60 | 90 | | | | | | 16 | 4 | 26 | 48 | 5 | |
| EMERY® 790 | Canola Oil Fatty Acid | 196-204 | 105-126 | 15 ax | 65 | 94 | | | | | | 3.5 | 2 | 64 | 18 | 9 | |
| EMERY® 792 | Vegetable Oil Fatty Acid | 196-204 | 105-126 | 17-26 | 50 | 95 | | | | | | 6.2 | 2.4 | 54.4 | 26.4 | 7.8 | |







We manufacture glycerin by splitting natural oils and fats. As a result of our extensive industry expertise and continual innovation, our glycerin products are available in a wide variety of technical grades, from 86% up to 99.7%. They are used in applications such as:

- Cellulose Films
- Deicing & Antifreeze
- Emulsifiers
- Ester Intermediates
- Humectants
- Moisturizers
- Nitration
- Plasticizers
- Polyols / Polyurethanes
- Resins
- Solubilizers

| REFINED GLYCERIN | SPECIFICATIONS | | | | | | | | |
|---|------------------------|------------------------|------------------------|--|--|--|--|--|--|
| | USP G | EP/BP GRADE | | | | | | | |
| | 96 % / EMERY* 912 | 99,7 % / EMERY® 916 | 99,7 % / EMERION° 3916 | | | | | | |
| Appearance | Clear colorless liquid | Clear colorless liquid | Clear colorless liquid | | | | | | |
| Identification A | Pass | Pass | Pass | | | | | | |
| Identification B | Pass | Pass | Pass | | | | | | |
| Identification C | Pass | Pass | Pass | | | | | | |
| Specific Gravity 25/25 °C | 1.2517 min | 1.2612 min | 1.2612 min | | | | | | |
| Residue on Ignition (ppm) | 100 max | 100 max | I 00 max | | | | | | |
| Chlorides (ppm Cl) | I 0 max | I 0 max | I 0 max | | | | | | |
| Sulfate (ppm) | 20 max | 20 max | 20 max | | | | | | |
| Heavy Metals (ppm Pv) | 5 max | 5 max | 5 max | | | | | | |
| Chlorinated Compounds (ppm Cl) | 30 max | 30 max | 30 max | | | | | | |
| Fatty Acids & Esters (ml 0.SN NaOH/S0g) | I max | I max | I max | | | | | | |
| $\label{eq:decompounds} \textbf{Diethylene glycol/related compounds-individual impurity } \%^*$ | Pass | Pass | Pass | | | | | | |
| Ethylene glycol/related compounds-total impurity %* | Pass | Pass | Pass | | | | | | |
| Assay (%) | 99-101 | 99-101 | 99-101 | | | | | | |
| Water(%) | 4.0 max | 0.3 max | 0.3 max | | | | | | |
| Glycerin Content (%) | 96 min | 99.7 min | 99.7 min | | | | | | |
| Odor | Odorless | Odorless | Odorless | | | | | | |
| Color (APHA) | 17.5 max | I 0 max | I 0 max | | | | | | |





CREATING VALUE FOR OUR CUSTOMERS, ANYWHERE IN THE WORLD.



Global Network

Emery Oleochemicals' operations are supported by a global workforce and an extensive distribution network covering over 50 countries worldwide. Our technical and industry experts located around the world are ready to help you select the best product to meet your specific requirements.

The availability of our products is subject to regional demand and regulations. Detailed information and certifications are available upon request.

Contact us today to learn more about oleochemicals solutions suited for basic to niche applications: www.emeryoleo.com/oleobasics





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