

CA1092 High Purity Stearic Acid, 90%

Safety Data Sheet



SECTION 1: Identification of the substance or mixture and the company or undertaking

1.1 Product identifier

Product type : Mixture
Trade name : CA1092 High Purity Stearic Acid, 90%
Label name : CA1092 High Purity Stearic Acid, 90%
Chemical name : Stearic acid, palmitic acid
CAS number : 57-11-4
EC number : 200-313-4

1.2 Recommended and restricted uses of the substance or mixture

Recommended uses : Industrial, lubricants, personal care, cleaners, detergents, soaps, textile additives, rubber additives.
Restricted uses : None known.

1.3 Company identification

Company name : Chemical Associates – A Division of Univar USA Inc.
Company address : 1270 South Cleveland Massillon Road
: Copley, OH 44321-1683
Company telephone : 330-666-5200

1.4 Emergency telephone number

Company emergency telephone : 800-347-2891
CHEMTREC telephone : 800-424-9300

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (29CFR1910.1200 Appendix A) : None.
GHS physical hazard : None.
GHS health hazard : None.
GHS environmental hazard : None.

2.2 Label warnings of the substance or mixture

Signal word : None.
Hazard statements : None.
Precautionary statements : None.

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Hazard symbol (pictogram) : None.

2.3 Hazards not otherwise classified

Other hazards : May form explosive dust clouds in air
: Particles in air may cause eye irritation.
: Inhalation or ingestion may cause mucous membrane irritation.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common name	Percent	CAS number	Health hazard
Not applicable.				

3.2 Mixtures

Chemical name	Common name	Typical %	CAS number	Health hazard
Octadecanoic acid	Stearic Acid	92	57-11-4	None
Hexadecanoic acid	Palmitic Acid	8	57-10-3	None

SECTION 4: First-aid measures

4.1 Description of first-aid measures

Exposure route	First-aid measure
Inhalation	: Remove the victim into fresh air. Observe victim's breathing. If breathing is labored seek immediate medical attention.
Skin contact	: Wash with soap and water. If irritation develops, seek medical attention. Launder contaminated clothing.
Eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses if present and easy to do. If irritation occurs, seek immediate medical (ophthalmologist) attention.
Ingestion	: Rinse mouth with plenty of water. For ingestion of large quantities seek immediate medical attention. Do not induce vomiting. Contact poison control center.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms after inhalation	: May experience dizziness and headache. : Mild irritation of the nose and throat may occur.
Symptoms after skin contact	: Mild irritation of the skin may occur.
Symptoms after eye contact	: Mild irritation of the eye tissue may occur. : May cause corneal inflammation.
Symptoms after ingestion	: Mild tingling of the tongue and mouth. : May cause gastrointestinal irritation, nausea and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

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Treatment after inhalation : If breathing is labored seek immediate medical attention.
Treatment after skin contact : If skin irritation occurs seek immediate medical attention.
Treatment after eye contact : If eye irritation occurs seek immediate ophthalmologist attention.
Treatment after ingestion : If ingestion of a large quantity seek immediate poison control center.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable media : Carbon dioxide, alcohol resistant foam and water spray.
Unsuitable media : None known.

5.2 Specific hazards arising from the substance or mixture

Direct fire hazard : Not flammable.
Indirect fire hazard : Exposure to temperature above the flash point (185°C).
Explosive hazard : Exposure to temperature above the flash point (185°C).
Reactivity : Reactivity with strong oxidizers.
Combustion products : Carbon dioxide and carbon monoxide.

5.3 Special protective equipment and precautions for fire-fighters

Protective equipment : Full protective clothing.
: Self contained breathing apparatus.
Precautions : No additional information available.
Emergency response guide : Not a hazardous material.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Mixture is not hazardous. If mixture is a hot mist or dust, stay upwind.
Protective equipment : Wear rubber gloves, rubber boots, face shield and chemical hazard suit. If material is a hot mist or dust wear dust mask or self contained breathing apparatus.
Emergency procedures : Mark the spill area with hazard tape or cones. Contain the hot liquid spill area with suitable absorbent. Keep away from streams, rivers and lakes. If mixture is a hot mist or dust, alert immediate neighborhood to close windows and doors. Contain and dissipate hot mist or dust via spraying with water.

6.2 Environmental precautions

Precautions : Keep out of streams, rivers and lakes. Mixture is regulated as oil under the Clean Water Act. Abide by all laws per this regulation.

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6.3 Methods and materials for containment and cleanup

Methods : Use chemical absorbent pigs or manually spread absorbent onto hot liquid spill area. After the mixture is absorbed, dispose in approved waste facility.

Materials : Approved materials include dry earth, sand, clay, chemical absorbent, vermiculite and carbon.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling temperature : About 10 - 20°C above the melt point (67 - 69°C).

Handling equipment : Rubber hoses or stainless steel (grade 304) lines. Stainless steel (grade 304) for pumps.

7.2 Conditions for safe storage, including any incompatibilities

Storage area : Store in dry area. Store at room temperature. Store in dyke area to contain any spills. Protect from heat.

Packaging materials : Polyethylene, stainless steel (grade 304) and rubber lined or epoxy lined tanks or drums. Graphite or rubber gaskets.

Incompatibilities : Kraft or polyethylene bags for flake, bead or powder form.
: Strong oxidizers.

SECTION 8: Exposure controls/personal protection

8.1 Exposure controls

OSHA PEL : None.

ACGIH TLV : None.

NIOSH REL : None.

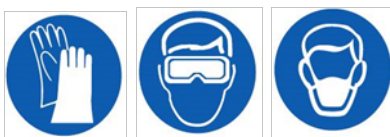
8.2 Appropriate engineering controls

Engineering controls : If dust exists, install ventilation equipped with carbon canisters. Ventilation should be 10 air exchanges per hour. Local exhaust ventilation is recommended.

8.3 Personal protection equipment

Personal protective equipment : Rubber gloves and safety glasses. Dust mask if dust exists.

Personal protective equipment pictograms :



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SECTION 9: Physical and chemical properties

9.1 Physical and chemical properties

Appearance	: White, waxy solid in flake, bead or powder form. : Clear light color liquid above the mixture melt point (67 - 69°C).
Odor	: Mild fatty.
Odor threshold	: No data available.
pH	: No data available. Mixture is not readily soluble in water.
Melting point	: 67 - 69°C range.
Boiling point	: Approximately 382°C
Flash point	: 185°C Cleveland Closed Cup.
Evaporation rate	: No data available.
Flammability	: Not flammable.
Lower flammability limit	: No data available.
Upper flammability limit	: No data available.
Vapor pressure	: 10 mm Hg at 225°C (this mixture). : 4.3x10 ⁻⁸ mm Hg at 25°C (stearic acid). : 3.8x10 ⁻⁷ mm Hg at 25°C (palmitic acid).
Vapor density	: No data available.
Relative density	: 0.85 at 75/25°C (water).
Solubility	: Complete in ethanol and acetone. : Insoluble in water.
Partition coefficient for n-octanol/water	: Log Kow = 8.23 (stearic acid). : Log Kow = 7.17 (palmitic acid).
Auto-ignition temperature	: 395°C.
Decomposition temperature	: 380 - 385°C.
Viscosity	: 7.79 mPas (cps) at 80°C.

9.2 Other information

Other information : No additional information available.

SECTION 10: Stability and reactivity

Reactivity	: May react violently with oxidizers.
Chemical stability	: Stable under storage conditions.
Possibility of hazardous reactions	: Hazardous polymerization does not occur.
Conditions to avoid	: Pressure, shock, static discharge or vibration does NOT result in a hazardous condition.
Incompatible materials	: Oxidizers and strong bases.
Hazardous decomposition products	: Carbon dioxide and carbon monoxide.

SECTION 11: Toxicological information

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11.1 Information on the likely routes of exposure

Inhalation exposure : From hot mist or dust.
Skin exposure : From hot mist or dust.
Ingestion exposure : Not a likely route of exposure.
Eye contact : From hot mist or dust.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Labored breathing and mild irritation of the lungs may occur.
Skin contact : Mild skin irritation may occur.
Ingestion : Mild irritation of the mouth, tongue, esophagus and stomach may occur.
Eye contact : Mild eye irritation may occur.

11.3 Delayed and immediate effects and also chronic effects from short and long term exposure

Inhalation : Chronic effects are not known.
Skin contact : Chronic effects are not known.
Ingestion : Chronic effects are not known.
Eye contact : Chronic effects are not known.

11.4 Numerical measures of toxicity

Oral LD50 : Rat 4600 mg/kg (stearic acid).
: Rat > 10000 mg/kg (palmitic acid).
: Mouse 57 mg/kg intravenous (palmitic acid).
Skin LD50 : Rabbit > 5000 mg/kg (this mixture).
Ingestion LD50 : Human LD100 14286 mg/kg (stearic acid).
Inhalation LD50 : No data available.
Skin primary irritation : Only one of 116 human subjects exposed to a repeat insult patch test of 0.1 ml of a cosmetic containing 10% stearic acid developed moderate erythema.
: Of 100 human subjects exposed to a shave foam formulation containing 8% stearic acid over a 2 to 4 week period, none developed skin irritation.
: Stearic acid produced no skin irritation in humans in closed-patch tests when applied as a 7% solution in petrolatum for 48 hours.
: Of 52 human subjects exposed to a repeat insult patch test of a shave cream formulation containing 2.2% palmitic acid, none developed skin irritation.
: Of 16 human subjects exposed to 0.2 ml of a 50% solution of myristic acid in mineral oil for 5 days, the erythema score was 0.48 (maximum score of 5).
Eye primary irritation : No ocular irritation occurred in 6 albino rabbits treated with commercial grade stearic acid.
: Mild conjunctival erythema occurred in 3 of 6 albino rabbits treated with triple pressed stearic acid.
: Cosmetic product formulations containing 2.2 and 4.4% palmitic acid produced no ocular irritation in 6 albino rabbits.

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: Slight conjunctival irritation was produced in rabbit eyes 24 hours after instillation of commercial grade myristic acid and 50% myristic acid in petrolatum.

11.5 Carcinogenicity

National Toxicology Program : Not listed.
International Agency for
Research on Cancer : Not listed.
OSHA : Not listed.
NIOSH : Not listed.

11.6 Other toxicological information

Reproductive toxicity : Not classified.
Germ cell mutagenicity : Not classified.
Respiratory or skin sensitization : Not classified.
Specific target organ toxicity,
single exposure : No data available.
Specific target organ toxicity,
repeated exposure : No data available.
Aspiration hazard : No data available.

SECTION 12: Ecological information

12.1.1 Ecotoxicity aquatic

Fish LC50 : 125 mg/l 96 hour red killifish (stearic acid sodium salt).
: 118 mg/l 96 hour red killifish (myristic acid sodium salt).
Daphnia EC50 : No data available.
Rotifer EC50 : No data available.
Algae EC50 : No data available.

12.1.2 Ecotoxicity terrestrial

Ecotoxicity terrestrial : No data available.

12.2 Persistence and degradability

Water : 43.9% 5 day BOD activated sludge (stearic acid).
: 37% 5 day BOD activated sludge (palmitic acid).
: Readily degradable.
Soil : Koc = 710,000 (stearic acid).
: Koc = 189,000 (palmitic acid).
: Immobile.
Air : 17 hour half life (stearic acid).
: 20 hour half life (palmitic acid).

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12.3 Bio-accumulative potential

Log Kow : 8.23 (stearic acid).
: 7.17 (palmitic acid).
: This mixture has the potential to bio-concentrate.

12.4 Mobility in soil

Surface tension : No data available.
Soil mobility : Koc = 710,000 (stearic acid).
: Koc = 189,000 (palmitic acid).
: Immobile.

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment : No data available.

12.6 Other adverse effects

Air : Not dangerous to the ozone layer.
Water : Mild pollutant to surface of water.

SECTION 13: Disposal considerations

13.1 Description of waste residues

Storage tank residues : Hot liquid residue from tank cleaning.
Empty package residues : Solid residue remaining in emptied bag or drum container.
Transport trailer residues : Hot liquid residue from transport trailer cleaning.
Absorbent material : Solid absorbent containing mixture from a spill.

13.2 Safe handling of waste residues

Storage tank residues : Refer to section 7 for safe handling.
Empty package residues : Refer to section 7 for safe handling.
Transport trailer residues : Refer to section 7 for safe handling.
Absorbent material : Refer to section 7 for safe handling.

13.3 Methods of disposal

Storage tank residues : Dispose via an approved incineration facility.
: Dispose via an approved land fill facility.
Empty package residues : Dispose only in accordance with local, state and federal regulations.
: Remove package to an approved package cleaning and recycling facility.
Transport trailer residues : Dispose only in accordance with local, state and federal regulations.
: Clean transport trailer at an approved cleaning facility.
: Disposal of cleaning residues must be in accordance with local, state

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Absorbent material and federal regulations.
: Dispose via an approved incineration facility.
: Dispose via an approved land fill facility.
: Dispose only in accordance with local, state and federal regulations.

13.4 Hazardous waste classification (RCRA)

Classification	Regulation	Listed	Hazardous waste number
Ignitability	40CFR261.21	No	
Corrosivity	40CFR261.22	No	
Reactivity	40CFR261.23	No	
Toxicity	40CFR261.24	No	

SECTION 14: Transport information

14.1 UN number

UN number : None.

14.2 UN proper shipping name

Proper shipping name : None.

14.3 Transport hazard class

Hazard class : None.

Hazard label : None.

Hazard pictogram : None.

14.4 Packing group

Packing group : None.

14.5 Environmental hazards

Marine pollutant : Not listed.

14.6 Transport in bulk

US DOT : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

MARPOL 73/78 : Not regulated.

IBC code : Not regulated.

14.7 Special precautions for user

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Special precautions : No additional information available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the substance or mixture

15.1.1 US regulations

SARA 302 (40CFR355) : Not listed.
SARA 311/312 (40CFR370.66) : Not listed.
SARA 313 (40CFR372.65) : Not listed.
CERCLA (40CFR302.4) : Not listed.
California proposition 65 : Not listed.
German WGK class : 0 (no hazard to waters).

15.1.2 Chemical inventories

TSCA USA : Listed.
AICS Australia : Listed.
DSL Canada : Listed.
EC Europe : Listed.
ECL Korea : Listed.
IECSC China : Listed.
ENCS Japan : Listed.
NzloC New Zealand : Listed.
PICCS Philippines : Listed.
SWISS Switzerland : Listed.

15.2 Chemical safety assessment

Safety assessment : No additional information available.

SECTION 16: Other information

16.1 Hazard ratings

	Health	Flammability	Physical hazards	Instability
HMIS (USA)	1	1	0	
NFPA (USA)	1	1		0

16.2 Safety Data Sheet information

Revision date (MM/DD/YY) : 12/04/2014
Supersede date (MM/DD/YY) : 03/01/2013

16.3 Notice to reader

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