



IRRH SPECIALITY CHEMICALS CO. LTD

Head office: 2710 Bongmyeong-dong, Heungdeok-gu,

, Cheongju-City, Chung-Buk, Korea

Factory : 315, Mokheang-Dong, Chungju-City, Chung-Buk, Korea

TEL : + 82-43-218-5060, Fax: +82-43-218-5061

TECHNICAL INFORMATION

Zinc – Stearate

2008

IRRH SPECIALTY CHEMICALS CO., LTD

<http://www.irrhsc.com>



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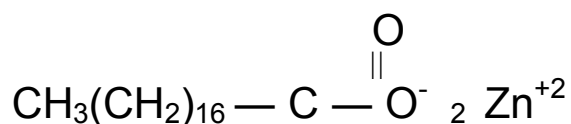
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Zinc – Stearate

1. Product : ISC - 500 (Powder Type)

2. Chemical Structure: $Zn (C_{17}H_{35}COO)_2$ M.W = 632.32



3. Specification

ANALYSIS	ISC - 500
Appearance	White Powder
Moisture (%)	0.5 Max.
325Mesh Particle pass (Pass / mesh)%	99.0/325 Min.
Free Fatty Acid (%)	0.5 Max.
Melting Point (°C)	116 ~ 125
Metal Content (%)	10.4 ~ 11.4
Yellow Index	25 Max
Assay (%)	13 ~14
Density	0.28 gr/ml

4. Packing: Net Weight 20kg/Paper bag inside PE liner
Pallet unit: 1000Kg / one pallet

5. Validity Term: 3 Year from production date



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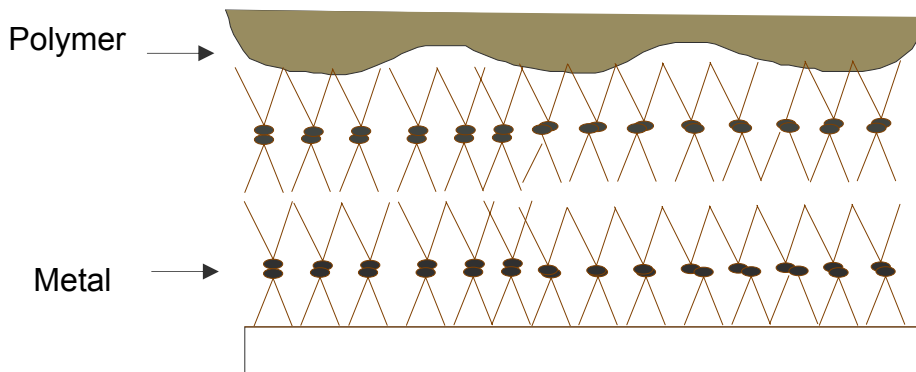
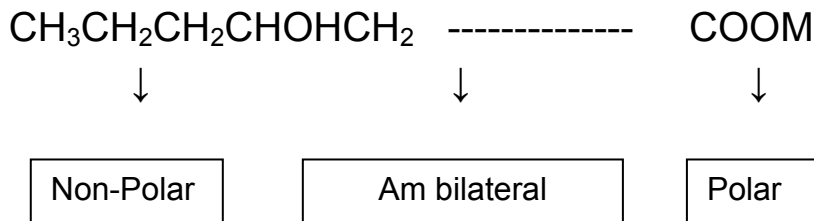
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Characteristics & Structure

- ISC-500 has excellent performance to reduce die deposit during extrusion
- The superior of heat stability, mechanical stability, shears stability.
- ISC-500 has multifunction lubricant and it has no physiologic toxicity.



Applications

- Plastics (PVC, Polystyrene, etc)
- Color Concentrates
- Rubber
- Grease
- Pipe, Tube
- BMC (Bulk Molding Compound), SMC (Sheet Molding Compound)
-



: 108°, Zn-St : 135°, Ca-St : 128° , Mg-St : 112° , Al-St : 125°



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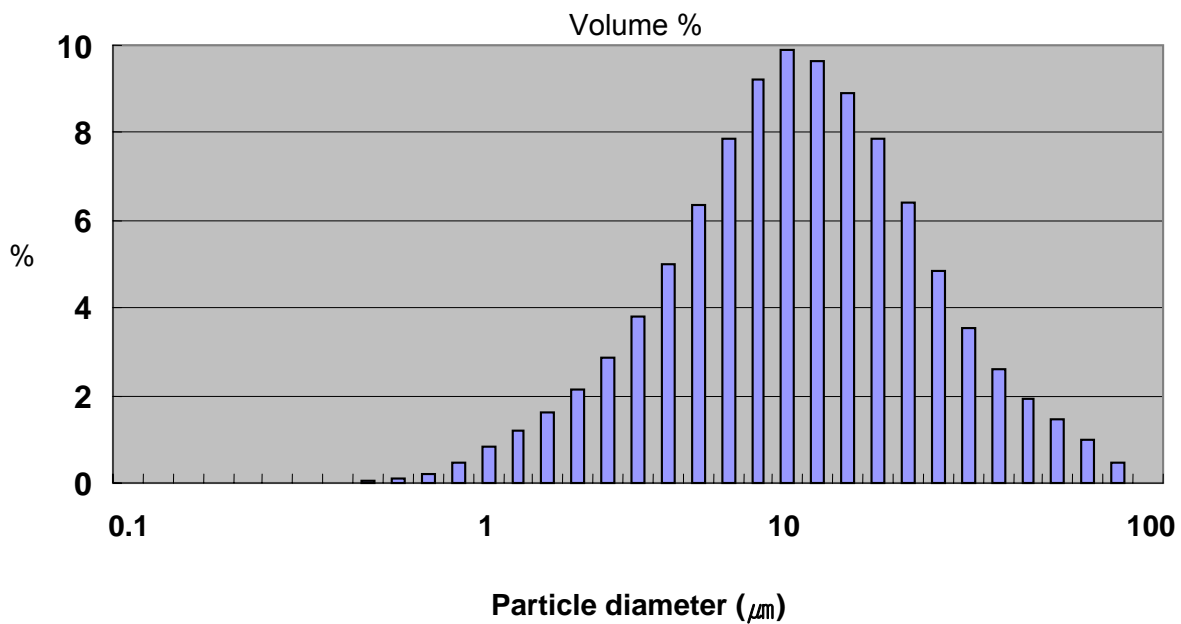
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Solubility

Solvent	Temp (°C)	solubility(g/100ml)
Methanol	65	0.05 max
Ethanol	75	0.02 max
Dioxan	75	0.4 max
Tetrahydropyran	65	0.5 max
Ethyl Acetate	75	0.01 max
Petroleum Ether	25	0.00 max
Xylene	75	1.5 max
Toluene	75	1.0 max
Solvent Naphtha	75	1.5 max

Particle size

ISC500 PARTICLE DISTRIBUTION





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MATERIAL SAFTY DATA SHEET (MSDS)

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

IRRE SPECIALTY CHEMICALS CO., LTD.

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SUBSTANCE: ZINC STEARATE

TRADE NAMES/SYNONYMS:

OCTADECANOIC ACID, ZINC SALT; STEARIC ACID, ZINC SALT; ZINC DISTEARATE;
DIBASIC ZINC STEARATE; ZINC OCTADECANOATE; C36H70O4ZN; OHS25560; RTECS
ZH5200000

CHEMICAL FAMILY: metal, salt

CREATION DATE: May 04 2004

REVISION DATE: Feb 07 2006

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: ZINC STEARATE

CAS NUMBER: 557-05-1

EC NUMBER (EINECS): 209-151-9

PERCENTAGE: 100.0

SECTION 3 HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=1 REACTIVITY=0

EC CLASSIFICATION (CALCULATED): No classification assigned.



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EMERGENCY OVERVIEW:

CHANGE IN APPEARANCE: moisture-sensitive

PHYSICAL FORM: powder

ODOR: distinct odor

MAJOR HEALTH HAZARDS: No significant target effects reported.

PHYSICAL HAZARDS: Dust/air mixtures may ignite or explode.

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation, difficulty breathing.

LONG TERM EXPOSURE: bluish skin color, lung damage.

SKIN CONTACT:

SHORT TERM EXPOSURE: no information on significant adverse effects.

LONG TERM EXPOSURE: no information on significant adverse effects.

EYE CONTACT:

SHORT TERM EXPOSURE: irritation.

LONG TERM EXPOSURE: no information is available.

INGESTION:

SHORT TERM EXPOSURE: diarrhea.

LONG TERM EXPOSURE: no information is available.

CARCINOGEN STATUS:

OSHA: N

NTP: N

IARC: N

SECTION 4 FIRST AID MEASURES

INHALATION: When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately.

Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION: If vomiting occurs, keep head lower than hips to help prevent



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aspiration. Get medical attention, if needed.

ANTIDOTE: calcium disodium edetate/dextrose, intravenous; calcium disodium edetate/procaine, intramuscular.

NOTE TO PHYSICIAN: For inhalation, consider oxygen.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Slight fire hazard. Dust/air mixtures may ignite or explode.

EXTINGUISHING MEDIA: regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

FLASH POINT: 531 F (277 C) (OC)
LOWER FLAMMABLE LIMIT: 0.025%
AUTOIGNITION: 788 F (420 C)

SECTION 6 ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

SECTION 7 HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.



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SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

ZINC STEARATE:

5 mg/m³ OSHA TWA (respirable particulate)

15 mg/m³ OSHA TWA (total particulate)

10 mg/m³ OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30, 1993)

10 mg/m³ ACGIH TWA (total particulate)

5 mg/m³ NIOSH recommended TWA 10 hour(s) (respirable particulate)

10 mg/m³ NIOSH recommended TWA 10 hour(s) (total particulate)

VENTILATION: Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Protective clothing is not required.

GLOVES: Protective gloves are not required, but recommended.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any dust, mist, and fume respirator.

Any air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a dust, mist, and fume filter.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: solid

CHANGE IN APPEARANCE: moisture-sensitive

PHYSICAL FORM: powder



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ODOR: distinct odor

MOLECULAR WEIGHT: 632.33

MOLECULAR FORMULA: ZN-(C18-H35-O2)2

BOILING POINT: decomposes

MELTING POINT: 266 F (130 C)

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

SPECIFIC GRAVITY (water=1): 1.095

WATER SOLUBILITY: insoluble

PH: 6.5-7.5 (33% slurry)

VOLATILITY: Not applicable

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not applicable

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SOLVENT SOLUBILITY:

Soluble: dilute acids, benzene

Insoluble: ether, alcohol

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

INCOMPATIBILITIES: bases, oxidizing materials

HAZARDOUS DECOMPOSITION: Thermal decomposition products: oxides of zinc, carbon.

POLYMERIZATION: Will not polymerize.

SECTION 11 TOXICOLOGICAL INFORMATION

ZINC STEARATE:

TOXICITY DATA:

>200 mg/l/1 hour(s) inhalation-rat LC50; >10 gm/kg oral-rat LD50.

ACUTE TOXICITY LEVEL: Insufficient Data.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders, skin disorders and allergies.



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SECTION 12 ECOLOGICAL INFORMATION

Not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

SECTION 14 TRANSPORT INFORMATION

No classification assigned.

SECTION 15 REGULATORY INFORMATION

U.S. REGULATIONS:

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): N

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): Y

ZINC COMPOUNDS

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: N

CHRONIC: N

FIRE: N

REACTIVE: N

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65: N

EUROPEAN REGULATIONS:

EC NUMBER (EINECS): 209-151-9

SECTION 16 OTHER INFORMATION



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MSDS SUMMARY OF CHANGES

SECTION 3 HAZARDS IDENTIFICATION

SECTION 15 REGULATORY INFORMATION

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