

SAFETY DATA SHEET

Date Updated: 2012-04-25

Version:

Regulation: In accordance with Regulation (EU) 453/2010 (REACH), Annex II

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

Name of product: HI-FLOW (grade name : BA,MI,IL, GP)
Synonyms: -
CAS #: 557-05-1, 91051-01-3
EC #: 209-151-9, 293-049-4
Pre-registration #: -

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Various plastic, rubber lubricants, release agents, dispersing agents, water repellents, etc.
Restrictions on use : Use for recommended use only.

1.3 Details of the supplier of the safety data sheet

Company name: SINWON CHEMICAL CO.,LTD.
Address: 1Ra-106, Shihwa Industrial Complex, #1236-5, Jungwang-Dong, Shihung-City, Kyonggi-Do, Korea
Contact Telephone: +82-31-432-6688
Fax: +82-31-432-9204-
Email Address: swc11@swchem.co.kr
Emergency Telephone: +82-31-432-6688

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

Classification:

Zinc distearate is not classified according to Regulation (EU) 453/2010 (REACH), Annex II.

2.2 Label elements

Labelling : Not classified

Signal word : Not classified

Hazard statement : Not classified

Additional precautionary statements : Not classified

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	Conc ⁿ / %	CAS #	EC #	Classification
Zinc distearate	> 97	557-05-1	209-151-9	See section 2
		91051-01-3		
Water	2	7732-18-5	231-791-2	See section 2

4. FIRST AID MEASURES

4.1 Description of first aid measures

- After skin contact: - In case of contact with substance, immediately flush eyes with running water at least 20 minutes.
 - Get immediate medical advice/attention.
- After eye contact: - In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
 - Remove and isolate contaminated clothing and shoes.
 - Wash contaminated clothing and shoes before reuse.
 - Get immediate medical advice/attention.
- After ingestion: - Specific medical treatment is urgent.
 - Move victim to fresh air.
 - Give artificial respiration if victim is not breathing.
 - Administer oxygen if breathing is difficult.
- After inhalation: - Do not let him/her eat anything, if unconscious.
 - Get immediate medical advice/attention.

4.2 Most important symptoms and effects

- Acute effects: No acute effects are anticipated if first aid treatment is applied and is effective.
- Delayed effects: No delayed effects are anticipated if first aid treatment is applied and is effective.

4.3 Indication of immediate medical attention and notes for physician

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
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5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Extinguishing media:
- Suitable extinguishing media:
 - Small Fire: dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO₂
 - Large Fire: water spray/fog, regular foam
 - Unsuitable extinguishing media: High pressure water streams

5.2 Special hazards arising from the substance or mixture

- May be ignited by heat, sparks or flames.
- Containers may explode when heated.
- Some of these materials may burn, but none ignite readily.
- Fire will produce irritating and/or toxic gases.
- If inhaled, may be harmful.
- Some liquids produce vapors that may cause dizziness or suffocation.

5.3 Advice for firefighters

- Move containers from fire area if you can do it without risk.
 - Runoff from fire control may cause pollution.
 - Contact with substance may cause severe burns to skin and eyes.
 - Dike fire-control water for later disposal; do not scatter the material.
 - Fire involving Tanks; Cool containers with flooding quantities of water until well after fire is out.
 - Fire involving Tanks; Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
 - Fire involving Tanks; Always stay away from tanks engulfed in fire.
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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- Eliminate all ignition sources.
- Stop leak if you can do it without risk.
- Please note that materials and conditions to avoid .
- Ventilate the area.
- Do not touch or walk through spilled material.
- Prevent dust cloud.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

- Small Spill; Flush area with flooding quantities of water.
 - Small Spill; Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
 - Large Spill; Dike far ahead of liquid spill for later disposal.
 - With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.
 - Powder Spill; Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.
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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- Please note that materials and conditions to avoid.
- Wash thoroughly after handling.
- Please work with reference to engineering controls and personal protective equipment.
- Be careful to high temperature.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a closed container.
 - Store in cool and dry place.
 - Please note that materials and conditions to avoid.
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8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Exposure limits / standards:

Specific exposure limits have not been established or are not applicable unless listed below.

- Regulation in Korean: TWA = 10 mg/m³
 - US (NIOSH/OSHA/ACGIH):
 - NIOSH: TWA = 10 mg/m³
 - OSHA: TWA = 10 mg/m³
 - ACGIH: TWA = 10 mg/m³
 - EU Regulation: Not available
 - Other:
 - Netherland: TWA = 10 mg/m³
 - U.K.: TWA = 10 mg/m³, STEL = 4 mg/m³
 - Biological Exposure Index: Not available
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Occupational exposure controls : Not available

8.2 Exposure controls

Appropriate engineering controls :

- Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment :

Respiratory Protection:

- Breathing protection if dusts are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1).
- Respiratory protection: Wear NIOSH/MESA approved full or half face piece (with goggles) respiratory protective equipment.

Eye Protection:

- Wear breathable safety goggles to protect from particulate material causing eye irritation or other disorder.
- An eye wash unit and safety shower station should be available nearby work place.

Hand protection:

- Wear appropriate protective gloves by considering physical and chemical properties of chemicals.

Body protection:

- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.
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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Description :	Solid (powder)
Color :	White
Odor :	Characteristic odor
Odor threshold :	Not available
pH :	Neutral to moistened litmus paper
Melting point/freezing point :	130 °C
Initial boiling point and boiling range :	Not available
Flash point :	276 °C (open cup)
Evaporation rate :	Not available
Flammability (solid, gas) :	Not available
Upper/lower flammability or explosive limits :	Not available
Vapor pressure :	Approx. 0 mmHg
Solubility (ies) :	0.9 mg/L (20 °C)
Vapor density :	Not available
Specific gravity :	1.095 g/cm ³ (20 °C) (density)
Partition coefficient: n-octanol/water :	logK _{ow} = 1.2
Auto ignition temperature :	421 °C
Decomposition temperature :	Not available
Viscosity :	Not available
Molecular weight :	632.34

10. STABILITY AND REACTIVITY

10.1 Reactivity/Chemical stability/Possibility of hazardous reactions

- Stable under normal temperatures and pressures.

- Containers may explode when heated.
- Some of these materials may burn, but none ignite readily.
- Fire may produce irritating and/or toxic gases.
- If inhaled, may be harmful.
- Some liquids produce vapors that may cause dizziness or suffocation.

10.2 Conditions to avoid

- Ignition sources (heat, sparks or flames)

10.3 Incompatible materials

- Combustibles

10.4 Hazardous decomposition products

- Irritating and/or toxic gases

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
(a) Acute toxicity;	<u>Conclusion / Remarks</u>
By oral route	LD50 > 5,000 mg/kg bw (rat)
By dermal route	LD50 > 2,000 mg/kg bw (rabbit)
By inhalation route	LC50 > 50 mg/L/4hr (rat)
(b) Skin corrosion/irritation;	In Draize test with rabbits, irritations were not observed. (GLP)
(c) Serious eye damage/irritation;	In eye irritation test with rabbits, irritations were not observed.
(d) Respiratory or skin sensitization;	•Respiratory sensitization : Not available •Skin sensitization : It was not sensitising to human.
(e) Germ cell mutagenicity;	Not available
(f) Carcinogenicity;	• ACGIH : A4 Stearates • KOREA-ISHL, IARC, NTP, OSHA, EU Regulation 1272/2008 : not listed
(g) Reproductive toxicity;	Not available
(h) STOT-single exposure;	In acute toxicity with rats, no abnormalities of the lungs were observed.
(i) STOT-repeated exposure;	In dermal repeated-dose toxicity study with guinea pigs for 14 days, increased body weight were observed.
(j) Aspiration hazard.	Not available

12. ECOLOGICAL INFORMATION

	<u>Conclusion / Remarks</u>
12.1 Toxicity	
Acute toxicity	Not available
Chronic toxicity	Not available
12.2 Persistence and degradability	•Persistence : Low persistency (log Kow is less than 4 estimated.) (Log Kow = 1.2)

	• Degradability : Not available
12.3 Bioaccumulative potential	• Bioaccumulation : Bioaccumulation is expected to be low according to the BCF < 500 (BCF =3.162) (estimated) • Biodegradation : As not well-biodegraded, it is expected to have high accumulation potential in living organisms (BOD/COD = 0.138)
12.4 Mobility in soil	High potency of mobility to soil. (Koc = 234,300,000) (estimated)
12.5 Results of PBT and vPvB assessment	Not available
12.6 Other adverse effects	Not available

13. DISPOSAL CONSIDERATIONS

Waste from residues

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Container

Consider the required attentions in accordance with waste treatment management regulation.

14. TRANSPORT INFORMATION

UN #:	Not classified with dangerous goods
Class:	Not applicable
Proper shipping name:	Not applicable
Packing group:	Not applicable
Marine pollutant	Not applicable
Other information:	Not applicable

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

EU Regulatory Information

- **EU classification**

- Annex I of Directive 67/548/EEC:
 - Classification: Not classified
 - Risk phrases: Not applicable
 - Safety phrases: Not applicable
- EU CLP 1272/2008:
 - Classification: Not classified
 - Hazard statement codes: Not applicable
 - Precautionary statement codes: Not applicable

- **EU SVHC list** : Not regulated
- **EU Authorisation List** : Not regulated
- **EU Restriction list** : Not regulated

Foreign Regulatory Information

o External information

- U.S.A management information (OSHA Regulation) : Not regulated
- U.S.A management information (CERCLA Regulation) : Not regulated
- U.S.A management information (EPCRA 302 Regulation) : Not regulated
- U.S.A management information (EPCRA 304 Regulation) : Not regulated
- U.S.A management information (EPCRA 313 Regulation) : Not regulated
- Substance of Roterdame Protocol : Not regulated
- Substance of Stockholme Protocol : Not regulated
- Substance of Montreal Protocol : Not regulated

Foreign Inventory Status

- U.S.A management information : Section 8(b) Inventory (TSCA): present
- Japan management information : Existing and New Chemical Substances (ENCS): (2)-615
- China management information : Inventory of Existing Chemical Substances (IECSC):present
- Canada management information : Domestic Substances List (DSL): present
- Australia management information : Inventory of Chemical Substances (AICS): present
- New Zealand management : Inventory of Chemicals (NZIoC): present
- Philippines management information : Inventory of Chemicals and Chemical Substances (PICCS): present

15.2 Chemical safety assessment : In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for this substance.

16. OTHER INFORMATION

16.1 Indication of changes :

Version : 2

Revision date : 2012. 04. 25

16.2 Key literature reference and sources for data :

- International Uniform Chemical Information Database(IUCLID);<http://esis.jrc.ec.europa.eu/>
- U.S. National library of Medicine (NLM) Hazardous Substances Data Bank (HSDB) ;
<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB.htm>
- European Union Risk Assessment Report (RAR)
- EPISUITE v4.1; <http://www.epa.gov/opt/exposure/pubs/episuitedl.htm>
- Korea Occupational Health & Safety Agency; <http://www.kosha.net>
- National Chemicals Information System; <http://ncis.nier.go.kr/ncis/>
- National Emergency Management Agency-Korea dangerous material inventory management system;
<http://www.nema.go.kr/hazmat/main/main.jsp>
- Waste Control Act enforcement regulation attached [1]

Product safety data sheet for prepared in accordance with Regulation (EU) 453/2010 (REACH), Annex II.

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation, as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular

applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.
