SAFETY DATA SHEET

Date Printed : 26 April 2010

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Version : Rev. 6.1

Regulation : In accordance with Regulation (EU) 2020/878 (REACH), Annex II, and OSHA 29 CFR 1910.1200

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Name of product : HI-TAL (P1, P2, P3)
1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses :
Stabilizer for Catalyst
Uses advised against : No information available
1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier : SINWON industrial co., LTD.
Street address/P.O. Box : 546, Poseunggongdansunhwan-ro, Poseung-eup, Pyeongtaek-si, Gyeonggi-do
Country ID/Postcode/Place : Not available
Telephone number (if possible, indicate telefax) : +82-31-684-6688
e-mail address of competent person responsible for the SDS : swi@swchem.co.kr
National contact : Not available
1.4 Emergency Telephone
Emergency Telephone number : +82-31-684-6688
Opening hours : Not available
Other comments (e.g. language(s) of the phone service) : Not available

SECTION 2 : HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
HI-TAL is not classified according to Regulation (EC) No 1272/2008 [CLP] and OSHA 29 CFR 1910.1200 : Not classified
2.2 Label elements
Hazard pictograms : Not classified
Signal word : Not classified
Hazard statement : Not classified
Additional precautionary statements : Not classified
2.3 Other hazards
No information available

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture
Description of the mixture : Not mixture

CAS No.	EC No.	REACH Registration No.	%[weight]	Name	Classification according to Regulation(EC) No 278/2008(CLP)
11097-59-9	234-319-3	01-2119489902-26-0006	100	Magnesium aluminum hydroxide carbonate	See section 2

SECTION 4 : FIRST-AID MEASURES

4.1 Description of first aid measures

General notes

- Not available

Following inhalation

- Specific medical treatment is urgent.
- Move victim to fresh air.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.

Following skin contact

- In case of contact with substance, immediately flush skin with running water at least 20 minutes.
- Remove and isolate contaminated clothing and shoes.
- Wash contaminated clothing and shoes before reuse.
- Get immediate medical advice/attention.

Following eye contact

- In case of contact with substance, immediately flush eyes with running water at least 20 minutes.

Following ingestion

- Do not let him/her eat anything, if unconscious.
- Get immediate medical advice/attention.

Self-protection of the first aider

- Not available

4.2 Most important symptoms and effects, both acute and delayed

Acute effects

May cause mild eye irritation.

Delayed effects

No delayed effects are anticipated if first aid treatment is applied and is effective.

4.3 Indication of immediate medical attention and special treatment needed

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect

SECTION 5 : FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Suitable extinguishing media: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO_2
- 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.

5.3 Advice for firefighters

- Dike fire-control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- 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.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : Not available

Emergency procedures : Not available

For emergency responders

- 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

For containment

- Not available

For cleaning up

- Small Spill; Flush area with flooding quantities of water.
- 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.

Other information

- Not available

6.4 Reference to other sections

- See also sections 8 and 13 of the Safety Data Sheet.

SECTION 7 : HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures :

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

Measures to prevent fire : Not available

Measures to prevent aerosol and dust generation

- Not available

Measures to protect the environment :

- Not available

Advice on general occupational hygiene :

- Not available

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

- Store in a closed container.
- Store in cool and dry place.

Packaging materials : Not available

Requirements for storage rooms and vessels : Not available

Further information on storage conditions : Not available

7.3 Specific end use(s)

Recommendations : Not available

Industrial sector specific solutions : Not available

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limits

Name	Korea regulation	ACGIH regulation	Biological exposure index	OSHA regulation	NIOSH regulation	EU regulation	United Kingdom
[Carbonato(2)]hexadecahydroxy bis(aluminium)hexamagnesium (Magnesium aluminum hydroxide carbonate)	Not available	TWA = 1 mg/m^3 (respirable fraction)	Not available	Not available	Not available	Not available	Not available

8.2 Exposure controls

8.2.1 Appropriate engineering controls :

Substance/mixture related measures to prevent exposure during identified uses: No specific measures

Structural measures to prevent exposure: No specific measures

Organisational measures to prevent exposure: No specific measures

Technical measures to prevent exposure:

Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

8.2.2 Individual protection measures, such as personal protective equipment :

Eye and face 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.

Skin protection

Hand protection

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

Other skin protection

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

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.

Thermal hazards

Not available

8.2.3 Environmental exposure controls

Not available

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Description : Solid(powder)

Color : White

Odor : Not available

Odor threshold : Not available

pH : Not available

Melting point/freezing point : ≥150 ℃

Initial boiling point and boiling range : 333.6 ℃(760 mmHg)

Flash point : 169.8℃

Evaporation rate : Not available

Flammability (solid, gas) : Non flammable

Upper/lower flammability or explosive limits : Not available

Vapor pressure : 0.7 ± 0.1 Pa (20 ℃)

Solubility (ies) : 0.009 mg/L (20.4 ℃)

Vapor density : Not available

Relative density : Not available

Partition coefficient: n-octanol/water : Not available

Auto ignition temperature : > 400 ℃

Decomposition temperature : Not available

Viscosity : Not available

Explosive properties : Not available

Oxidizing properties : Not available

Molecular weight : 603.98

Density : 2.2 g/cm³(20 ℃)

9.2 Other information

- Not available

SECTION 10 : STABILITY AND REACTIVITY

10.1 Reactivity

- Not available

10.2 Chemical stability

- Not available

10.3 Possibility of hazardous reactions

- Fire may produce irritating and/or toxic gases.

- If inhaled, may be harmful.

10.4 Conditions to avoid

- Heat, sparks or flames.

10.5 Incompatible materials

- Flammable material

10.6 Hazardous decomposition products

- Not available

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

(a) Acute toxicity;	
Oral	- Rat, LD50 > 2,000 mg/kg (GLP)
Dermal	- Rat, LD50 > 2,000 mg/kg (GLP)
Inhalation	- Rat, LC50 > 5.17 mg/L/4hr (OECD TG 403, GLP)
(b) Skin Corrosion/ Irritation;	- In skin irritation study with rabbits, no skin irritation was caused by 4 hours of exposure to this substance. (OECD TG 404, GLP).
(c) Serious Eye Damage/ Irritation;	- This substance was considered mildly irritating to the rabbit eye. Changes were fully reversible within 3 days. (conjunctivae score (redness) = 1, chemosis score = 0.3, cornea score = 0, iris score = 0) (GLP)
(d) Respiratory sensitization;	- Not available
(e) Skin Sensitization;	- In guinea pig maximisation test, this material was not sensitizing. (92/69/EC, Annex V B6and OECD 406, GLP)
(f) Carcinogenicity;	- ACGIH : A4 - KOREA-ISHL, IARC, NTP, OSHA, EU Regulation 1272/2008 : not listed
(g) Mutagenicity;	- Negative reactions were observed in vitro mammalian cytogenicity study and bacterial reverse mutation assay. (GLP)
(h) Reproductive toxicity;	- Not available
(i) Specific target organ toxicity (single exposure);	- In acute inhalation toxicity study with rats, decreased breathing rate and slight laboured breathing were observed. (OECD TG 403, GLP).
(j) Specific target organ toxicity (repeat exposure);	- No effects were observed in repeated dose oral toxicity study with rats. NOAEL = 1,000 mg/kg bw/day (GLP)
(k) Aspiration Hazard;	- Not available

SECTION 12 : ECOLOGICAL INFORMATION

12.1 Toxicity	
Acute toxicity	
Fish	- 96hr-LC50 (*Cyprinus carpio*) > 100 mg/L (OECD TG 203, GLP)
Invertebrates	- 48hr-EC50 (*Daphnia magna*) > 100 mg/L (OECD TG 202, GLP)
Algae	- 72hr-EC50 (*Selenastrum capricornutum*) > 18 mg/L (OECD TG 201, GLP)
Chronic toxicity	
Fish	Not available
Invertebrates	Not available
Algae	- 72h-NOEC (*Selenastrum capricornutum*) = 10 mg/L (OECD TG 201, GLP)
12.2 Persistence and Degradability	Persistence : Not available Degradability : Not available
12.3 Bioaccumulative potential	Bioaccumulation : Not available Biodegradation : Not available

12.4 Mobility in soil	Not available
12.5 Results of PBT and vPvB assessment	Not available
12.6 Other adverse effects	Not available

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product/Packaging disposal

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

Waste codes / Waste designation according to LoW(2015) : Not available

Waste treatment-relevant information

- Bury in the management-typed burial facility for the specified waste, after packing with polyethylene or other similar packaging.
- Stabilize.
- Solidify with cement or synthetic polymer compounds or solidify in other similar way.

Sewage disposal-relevant information

Not available

Other disposal recommendations

Not available

SECTION 14 : TRANSPORT INFORMATION

14.1 UN Number : Not classified with a dangerous goods
14.2 UN Proper shipping name : Not applicable
14.3 Transport Hazard class : Not applicable
14.4 Packing group : Not applicable
14.5 Environmental hazards : Not applicable
14.6 Air transport(IATA) : Not dangerous goods
14.7 Special precautions for user
in case of fire : Not applicable
in case of leakage : Not applicable
14.8 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not Available

SECTION 15 : REGULATORY INFORMATION

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

EU Regulatory Information

EU classification :

EU CLP 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

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
Korea management information : Not regulated
Substance of Roterdame Protocol : Not regulated
Substance of Stockholme Protocol : Not regulated

Substance of Montreal Protocol : Not regulated

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

SECTION 16 : OTHER INFORMATION

Product safety data sheet for HI-TAL prepared in accordance with Regulation (EU) 2020/878 (REACH), Annex II, and OSHA 29 CFR 1910.1200

16.1 Indication of changes

Date Updated : 13 January. 2023

Version : Rev. 6.1

16.2 Abbreviations and acronyms

ACGIH = American Conference of Government Industrial Hygienists
CLP = Classification Labelling Packaging Regulation ; Regulation (EC) No 1272/2008
CAS No. = Chemical Abstracts Service number
DMEL = Derived Minimal Effect Levels
DNEL = Derived No Effect Level
EC Number = EINECS and ELINCS Number (see also EINECS and ELINCS)
EU = European Union
IARC = International Agency for Research on Cancer
ISHL = Industrial Safety & Health Law
NIOSH = National Institute for Occupational Safety & Health
NTP = National Toxicology Program
OSHA = European Agency for Safety and Health at work
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC(s) = Predicted No Effect Concentration(s)
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 2015/830
STP = Sewage Treatment Plant
SVHC = Substances of Very High Concern
vPvB = Very Persistent and Very Bioaccumulative
UN = United Nations
MARPOL = International Convention for the Prevention of Pollution from Ships (IMO)
IBC = Intermediate Bulk Container
CERCLA = Comprehensive Environmental Response, Compensation & Liability Act (US)
EPCRA = Emergency Planning and Community Right-to-Know Act (US)
EINECS = European Inventory of Existing Commercial chemical Substances
ELINCS = European List of Notified Chemical Substances

16.3 Key literature reference and sources for data :

OECD SIDS; http://webnet.oecd.org/hpv/ui/Search.aspx
REACH information on registered substances; http://apps.echa.europa.eu/registered/registered-sub.aspx
International Uniform Chemical Information Database(IUCLID); http://esis.jrc.ec.europa.eu/
European Union Risk Assessment Report (RAR); 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
TOMES-LOLI® ; http://www.rightanswerknowledge.com/loginRA.asp
ECOTOX; http://cfpub.epa.gov/ecotox/
National Emergency Management Agency-Korea dangerous material inventory management system; http://www.nema.go.kr/hazmat/main/main.jsp
The Chemical Database -The Department of Chemistry at the University of Akron; http://ull.chemistry.uakron.edu/erd/
Korea Maritime Dangerous Goods Inspection Center; http://www.komdi.or.kr/index.html

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation(EC) 1272/2008(CLP):

Classification according to Regulation (EC) 1272/2008	Classification procedure

16.5 Relevant R-phrases and/or H-statements (number and full text) : Not available

16.6 Training advice :

- Do not handle until all safety precautions have been read and understood.

16.7 Further information :

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation and OSHA 29 CFR 1910.1200, 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.