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1 Identification of the substance and the company

1.1 Product identifier

1.1.1 Substance name: Zeolites

1.1.2 EC No. : 215-283-8

1.1.3 REACH Registration No.: N/A

1.1.4 CAS No. : 1318-02-1

1.1.5 Product name/designation: Zeolite Molecular Sieve (HCX13Li)

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

1.2.1 Relevant identified uses

-Molecular sieve for the production of pure O₂ gas (~99%) Used in O₂-PSA(Pressure Swing Adsorption) or O₂-VSA (Vacuum Swing Adsorption) system

1.2.2 Uses advised against

-Not available

1.3 Details of the supplier of the safety data sheet

1.3.1 Manufacturer/Supplier

-Company name : HANCHANG IND. CO.,LTD

-Address : #227-14, Amsogogae-ro, Yanggam-myeon, Hwasung-si, Gyeonggi-do, Korea

-Telephone number: +82-31-353-2970/4, FAX: +82-31-353-2979

1.4 Emergency telephone number

1.4.1 EU-wide emergency number : 112

1.4.2 See section 16.6 for the list of telephone number of National Helpdesks in the European Economic Area.

2 Hazards identification

2.1 Classification of the substance/mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

-H335 specific target organ toxicity - single exposure (respiratory tract irritation): category 3

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) No 1272/2008 [CLP]

a) Hazard Pictogram(s)



b) Signal word: Warning

c) Hazard statement(s): H335 May cause respiratory irritation.

d) Precautionary statement(s)

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- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a poison center/doctor if you feel unwell.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

- 2.3.1 The product evolves heat on contact with water
- 2.3.2 May be harmful in contact with skin

3 Composition / Information on Ingredients

3.1 Substances

Chemical name / Synonym	CAS No.	EC No.	REACH Registration	Content (w%)	Classification [1272/2008/EC]	SCL / M-factor / ATE
Zeolites / Lithium Aluminosilicate	1318-02-1	215-283-8	Not registration	> 99.0	Not classified	-

3.2 Mixtures

- Not available

4 First Aid Measures

4.1 Description of first aid measures

4.1.1 General notes

- No general information.

4.1.2 Following inhalation

- a) Remove affected person to fresh air and give artificial respiration if needed. Seek medical advice if irritation occurs.
- b) If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

4.1.3 Following skin contact

- a) Normally no special precautionary measures should be needed.
- b) Flush skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes.
- c) In the event of any complaints or symptoms, avoid further exposure.
- d) Seek medical advice if irritation occurs.

e) Wash contaminated clothing thoroughly before re-using.

4.1.4 Following eye contact

- a) Do not rub your eyes.
- b) Immediately flush eye with water for at least 15 minutes while holding eyelids open.
- c) Seek medical advice if irritation occurs.

4.1.5 Following ingestion

- a) Not a likely route of exposure.
- b) Do not induce vomiting without medical advice. Keep the victim calm and warm.
- c) Get immediate medical attention

4.2 Most important symptoms and effects, both acute and delayed

- 4.2.1 EYES : If dusts are generated by processing, particulates may scratch eye surface. May causes mechanical abrasion.
- 4.2.2 SKIN : Negligible hazard at ambient temperatures. May cause transient irritation. May cause mechanical irritation. Sensitization: Not expected.
- 4.2.3 INHALATION : Inhalation of dust smay cause respiratory irritation. Repeated or prolonged exposure may irritate the respiratory tract.
- 4.2.4 INGESTION : Ingestion is not a likely route of exposure. Essentially non-toxic. No significant adverse effects from acute oral toxicity data

4.3 Indication of any immediate medical attention and special treatment needed

- 4.3.1 Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5 Fire Fighting Measures

5.1 Extinguishing media

-Not expected to burn.

5.1.1 Suitable extinguishing media

- a) Use extinguishing media appropriate for surrounding fire
- b) Dry chemical, carbon dioxide, regular foam extinguishing agent, water spray

5.1.2 Unsuitable extinguishing media

- a) Avoid use of water jet for extinguishing

5.2 Special hazards arising from the substance or mixture

- 5.2.1 This product is nonflammable and does not support combustion.
- 5.2.2 Zeolite is an inorganic material and will not create nor support conditions that would result

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in a dust explosion or fire.

5.2.3 Hazardous combustion products: Not available

5.3 Evacuate the personnel away from the fumes/dusts.

5.3.1 Cool down the containers/equipment exposed to heat with a water spray.

5.3.2 Wear appropriate protective equipment.

5.3.3 Wear appropriate protective equipment.

5.3.4 Notify your local firestation and inform the location of the fire and characteristics hazard.

5.3.5 Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

6 Accidental Release Measures

6.1 Personal Precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

- a) Emergency procedures: Not applicable
- b) If required, notify relevant authorities according to all applicable regulations.
- c) Protective equipment: Wear proper protective equipment.

6.1.2 For emergency responders

- a) Avoid dust formation.
- b) Restrict access to area as appropriate until clean-up operations are complete.
- c) Do not touch spilled material. Stop leak if you can do it without risk.
- d) Handle the damaged containers or spilled material after wearing appropriate protective equipment
- e) Moist with water to prevent dust scattering.
- f) Move container to safe area from the leak area.
- g) Must work against the wind, let the upwind people to evacuate.
- h) Must work against the wind, let the upwind people to evacuate.
- i) Remove all sources of ignition.
- j) Ventilate closed spaces before entering.
- k) Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.

6.2 Environmental precautions

6.2.1 Avoid dispersal of spilt material and runoff and contact with waterways, drains and sewers. If large spills, advise emergency services.

6.3 Methods and material for containment and cleaning up

6.3.1 For containment

- a) Clean up all spills immediately.
- b) Clear area of personnel and move up wind.

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- c) Control personal contact by using protective equipment.
- d) No smoking, flame or ignition sources.
- e) Stop leak if safe to do so.

6.3.2 For cleaning up

- a) Recover using mechanical means for recycling or disposal.
- b) Sweep up and place in a clearly labeled container for chemical waste.
- c) Wash contaminated area with large amounts of water.
- d) Recover the cleaning water for subsequent disposal.
- e) Notify the central and local government if the emission reach the standard threshold.
- f) Disposal of waste shall be in compliance with the Wastes Control Act
- g) Dust spills : Cover dust spills with plastic sheet or waterproof cloth to minimize spreading and avoid contact with water.
- h) Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- i) Small liquid state spills: Appropriate container for disposal of spilled material collected.

6.3.3 Other information

- a) Not available

6.4 Reference to other sections

- 6.4.1 See Section 13 for information on disposal.
- 6.4.2 See Section 7 for information on safe handling.
- 6.4.3 See Section 8 for information on personal protection equipment.

7 Handling and Storage

7.1 Precautions for safe handling

- 7.1.1 Do not taste or swallow.
- 7.1.2 Avoid breathing mist.
- 7.1.3 Do not get in eyes and avoid contact with skin and clothing.
- 7.1.4 Wear proper personal protective clothing to prevent direct contact with the skin and eyes.
- 7.1.5 Dealing only with a well-ventilated place.
- 7.1.6 Do not eat, drink or smoke in the work area.
- 7.1.7 Avoid contact with incompatible materials.
- 7.1.8 Minimize occurrence of dust and accumulation.
- 7.1.9 Comply with all applicable laws and regulations for handling
- 7.1.10 Do not handle until all safety precautions have been read and understood.
- 7.1.11 Get the manual before use.
- 7.1.12 Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.

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7.1.13 Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

7.2.1 Save in cool, dry and well ventilated place.

7.2.2 Keep sealed when not in use.

7.2.3 Avoid direct sunlight.

7.2.4 Check regularly for leaks.

7.2.5 Do not apply any physical shock to container.

7.2.6 Do not use damaged containers.

7.2.7 Keep in the original container.

7.2.8 Store according to current laws and regulations

7.3 Specific end use(s)

7.3.1 See Section 1 for information on 1.2 Relevant identified uses.

8 Exposure control and Personal protection

8.1 Control parameters

8.1.1 Occupational exposure limits

- a) European Union (EU) Commission Directive 2006/15/EC (IOELVs): Not available
- b) European Union (EU) Commission Directive 2006/15/EC (IOELVs) – Skin: Not available
- c) Greece Occupational Exposure Limits: Not available
- d) Netherlands Occupational Exposure Limits: Not available
- e) Denmark Indicative List of Organic Solvents: Not available
- f) Denmark List of Limit Values for Dust: Not available
- g) Latvia Occupational Exposure Limit Values (OELV) for Chemical Substances in the Work Environment AtmbExcel Air &Hydraulics9: Not available
- h) Latvia Carcinogens and their Occupational Exposure Limit Values (OELV): Not available
- i) Bulgaria Occupational Exposure Limits: Not available
- j) Bulgaria Limit values for the chemical agents in the air at the working environment: Not available
- k) Sweden Occupational Exposure Limit Values: Not available
- l) Sweden Occupational Exposure Limit Values and Measures against Air Contaminants: Not available
- m) Spain Changes Proposed for Occupational Exposure Limit Values: Not available
- n) Spain Occupational Exposure Limit for Chemical Agents: Not available
- o) Slovak Republic Highest Admissible Exposure Limits: Not available
- p) Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with fibrogenic effect: Not available
- q) Slovak Republic Highest Admissible Exposure Limits - Solid aerosols with possible fibrogenic effect: Not available
- r) Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with

nonspecific effect: Not available

- s) Ireland Occupational Exposure Limits: [Zeolites] - Occupational Exposure Limit Value (8-hour reference period) : 10 mg/m³ (Dusts non-specific total inhalable)
- t) UK Workplace Exposure Limits (WELs): Not available
- u) Austria Technical Exposure Limits (TRK Values): Not available: Not available
- v) Austria Occupational Exposure Limits - Maximum Workplace Concentrations (MAK)
- w) Italy Occupational Exposure Limits: Not available
- x) Czech Republic Occupational Exposure Limits (PEL and NPK-P): Not available
- y) Czech Republic Occupational Exposure Limits - Dusts predominately with fibrogenic effect: Not available
- z) Czech Republic Occupational Exposure Limits - Dusts with possible fibrogenic effect: Not available
- aa) Czech Republic Occupational Exposure Limits - Dusts predominately with nonspecific effect: Not available
- bb) Czech Republic Occupational Exposure Limits - Dusts predominately with irritating effect
- cc) Czech Republic Occupational Exposure Limits - Mineral fibrous dusts: Not available
- dd) Poland Workplace Maximum Allowable Concentration – Dust: Not available
- ee) Poland Workplace Maximum Allowable Concentration: Not available
- ff) France Threshold Limit Values for Occupational Exposure - VLE/VME: Not available
- gg) Finland Occupational Exposure Levels - Concentrations Known to be Harmful: Not available
- hh) Hungary Occupational Exposure Limits: Not available

8.1.2 Recommended Monitoring Procedures

- a) Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

8.1.3 DNEL/PNEC – Values

- a) Not available

8.2 Exposure controls

8.2.1 Appropriate engineering controls

- a) Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

8.2.2 Individual protection measures, such as personal protective equipment

- a) Hand protection
 - Wear appropriate glove.
- b) Eye protection
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
 - Wear primary eye protection such as splash resistant safety goggles with a secondary

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protection face shield.

c) Respiratory Protection

- Air-purifying respirator with high-efficiency particulate filtering
- Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection
- For Unknown Concentration 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.
- Respiratory protection is ranked in order from minimum to maximum.
- Self-contained breathing apparatus with a corpuscle filter of high efficiency
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

d) Skin protection

- Wear appropriate clothing.

8.2.3 Environmental exposure controls

- a) Do not let product enter drains. For ecological information refer to section 12.

9 Physical and Chemical Properties

- 9.1 APPEARANCE (PHYSICAL STATE, COLOUR etc.): Solid (Beads).
- 9.2 Color: Not available
- 9.3 Odor: Odorless
- 9.4 pH: Not available.
- 9.5 MELTING POINT/FREEZING POINT: > 1,200°C
- 9.6 INITIAL BOILING POINT AND BOILING RANGE: Not available.
- 9.7 FLASH POINT : None flammable.
- 9.8 EVAPORATION RAT: Not applicable.
- 9.9 FLAMMABILITY (SOLID, GAS): Not applicable.
- 9.10 UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: Not applicable.
- 9.11 VAPOR PRESSURE : Not applicable.
- 9.12 SOLUBILITY: < 1 g (20°C) in water or insoluble in water.
- 9.13 VAPOR DENSITY: Not applicable.
- 9.14 RELATIVE DENSITY: >1 (Water = 1).
- 9.15 PARTITION COEFFICIENT OF n-OCTANOL/WATE : Not applicable (Inorganic).
- 9.16 AUTO-IGNITION TEMPERATURE: None combustible.
- 9.17 DECOMPOSITION TEMPERATURE: Not available.
- 9.18 VISCOSITY: Not available.
- 9.19 Particle characteristics: 0.43mm~2.45mm

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10 Stability and Reactivity

10.1 Reactivity

10.1.1 Not available

10.2 Chemical Stability

10.2.1 This material is stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

10.3.1 Hazardous Polymerization will not occur.

10.4 Conditions to avoid

10.4.1 Minimize dust generation and accumulation.: Exposure to moisture.

10.4.2 Avoid exposure or contact to extreme temperatures.

10.4.3 Avoid contact with incompatible materials and condition.

10.5 Incompatible materials

10.5.1 Reactive agents (e.g. strong acids, strong bases etc.)

10.6 Hazardous decomposition products

10.6.1 None under normal use.

11 Toxicology Information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Acute toxicity

a) Oral

-[Zeolites] : LD50 >5110 mg/kg Rat (GLP) (ECHA)

b) Dermal

-[Zeolites] : LD50 > 2000 mg/kg Rabbit (ECHA)

c) Inhalation

-[Zeolites]: Dust LC0 ≥ 18.3 mg/L/ 60 min Rat No death Not classified (ECHA)

11.1.2 Skin corrosion/irritation: Not available

11.1.3 Serious eye damage/irritation: Not available

11.1.4 Respiratory sensitization: Not available

11.1.5 Skin sensitization: Not available

11.1.6 Germ cell mutagenicity: Not available

11.1.7 Carcinogenicity

a) IARC

-[Zeolites] : Group 3

b) OSHA

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-Not available

c) ACGIH

-Not available

d) NTP

-Not available

e) EU CLP

-Not available

11.1.8 Reproductive toxicity: Not available

11.1.9 Specific target organ toxicity(single exposure): Not available

11.1.10 Specific target organ toxicity(repeated exposure): Not available

11.1.11 Aspiration hazard: Not available

11.2 Information on other hazards: Not available

12 Ecological Information

12.1 Toxicity

12.1.1 Fish

a) [Zeolites] : LC50 1,800 mg/l 96 hr Brachydanio rerio (IUCLID)

12.1.2 Invertebrate

a) [Zeolites] : EC50 1,000 mg/l 48 hr Daphnia magna (IUCLID)

12.1.3 Algae

a) [Zeolites] : EC50 560 mg/l 96 hr Chlorella vulgaris (IUCLID)

12.2 Persistence and degradability

12.2.1 Persistence: Not available

12.2.2 Degradability: Not available

12.3 Bioaccumulative potential

12.3.1 Bioaccumulation: Not available

12.3.2 Biodegradability: Not available

12.4 Mobility in soil: Not available

12.5 Results of PBT and vPvB assessment: Not available

12.6 Endocrine disrupting properties: Not available

12.7 Other adverse effects: Not available

13 Disposal Considerations

13.1 Waste treatment methods

13.1.1 It shall be treated by incineration

13.1.2 Oil water separation technology shall be applied as pre-waste treatment if it is applicable

13.1.3 Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them

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13.1.4 Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act

13.1.5 Dispose of waste in accordance with all applicable laws and regulations.

14 Transport Information

The information in this section is for reference only and should not take the place of a shipping paper (BL). Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation.

14.1 UN number or ID number: Not applicable

14.2 UN proper shipping name: Not applicable

14.3 Transport hazard class(es): Not applicable

14.4 Packing group (IMDG CODE/IATA DGR): Not applicable

14.5 Environmental hazards: Not applicable

14.6 Special precautions for user

14.6.1 Emergency Action Code

14.6.2 Hazard No.(ADR)

14.6.3 Local transport follows in accordance with Dangerous goods Safety Management Law.

14.6.4 Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.

14.6.5 Tunnel Restriction Code

14.6.6 EmS FIRE SCHEDULE : Not available

14.6.7 EmS SPILLAGE SCHEDULE : Not available

14.7 Maritime transport in bulk according to IMO instruments

14.7.1 Not applicable

15 Regulatory Information

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

15.1.1 Europe regulatory

a) REACH Restricted substance under REACH: Not applicable

b) REACH Substances subject to authorization under REACH: Not applicable

c) REACH SVHC: Not applicable

d) Europe PBT: Not applicable

e) European Union (EU) Transport of Dangerous Goods by Road - Dangerous Goods List: Not applicable

15.2 UNITED STATES REGULATORY INFORMATION

15.2.1 U.S. Federal, Environment

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- a) Clean Water Act Section 304(a)(1) Ambient Water Quality Criteria (AWQC) (April 4, 2016)
Generics group name: ALUMINUM PH 6.5 - 9.0
Freshwater Criterion Maximum Concentration (CMC) (acute): 750 ug/L
Freshwater Criterion Continuous Concentration (CCC) (chronic): 87 ug/L
- b) EPA Design for the Environment's (DfE) Safer Chemical Ingredients List (updated October 26, 2015) Name: Zeolites"

15.2.2 U.S. Federal, Health

- a) IARC Monographs. Overall Evaluations of Carcinogenicity (Volumes 1-116)
CAS RN: 1318-02-1
Name: ZEOLITES OTHER THAN ERIONITE (CLINOPTILOLITE, PHILLIPSITE, MORDENITE, NON-FIBROUS JAPANESE ZEOLITE, SYNTHETIC ZEOLITES).
IARC Overall Evaluation is: 3 (not classifiable as to carcinogenicity in humans)."

15.2.3 U.S. Federal, Pesticides

- a) Pesticide Chemical Tolerance Exemptions (40 CFR 180.910), Inert Ingredients
Used Pre- and Post-Harvest (Apr. 28, 2004)
CAS RN: 1318-02-1
Name: Zeolite (hydrated alkali aluminum silicate)
Group: Zeolite (hydrated alkali aluminum silicate)
Use: Solid diluent, carrier
- b) Inert Ingredients Permitted for Use in Nonfood Use Pesticide Products (April 2011)
CAS RN: 1318-02-1
Name: Zeolites"

15.2.4 U.S. Federal, Workplace

- a) ACGIH Threshold Limit Values (as amended by the ACGIH 2016 TLVs and BEIs booklet, March 2016)
Generics group name: ALUMINUM METAL AND INSOLUBLE COMPOUNDS, RESPIRABLE FRACTION
Carcinogen Category: A4 (Not Classifiable as a Human Carcinogen) The 8-Hour Exposure Limit (TLV-TWA) is: 1 mg/m³.
- b) OSHA Hazard Communication Standard: On One of the Floor Lists of the OSHA HCS (29 CFR 1910.1200)
Generics group name: ALUMINUM METAL AND INSOLUBLE COMPOUNDS, RESPIRABLE FRACTION"

15.2.5 U.S. State

- a) Maryland. Toxic Air Pollutant (TAP) Screening Levels. COMAR 26.11.16.06 and .07 (April 2012)
CAS RN: 1318-02-1
Name: ZEOLITE
- b) Texas, Effects Screening Levels (Texas Commission on Environmental Quality, as updated

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through March 17, 2014)
CAS RN: 1318-02-1
Name: SODIUM ALUMINOSILICATE, PARTICULATE
Short-term ESL: 50 ug/m3
Short-term exposure time: 1 hr
Annual ESL: 5 ug/m3"

15.3 KOREA REGULATORY INFORMATION

15.3.1 Chemical Control Act (CCA)

- a) Toxic Chemical: Not regulated.
- b) Substance subject to authorization: Not regulated.
- c) Prohibited or Restricted Chemical: Not regulated."

15.3.2 Industrial Safety and Health Law (ISHL)

- a) Prohibited Hazardous Substances: Not regulated.
- b) Hazardous Substances Requiring Licenses : Not regulated.
- c) Harmful Substances Requiring Workplace Environment Monitoring :
- d) Aluminum and compounds, as Al (Metal dust, Pyro powders, Fume).
- e) Harmful Substances Requiring Special Medical Examination : Aluminum and
- f) compounds, as Al.
- g) Controlled Hazardous substances : Aluminum and its compounds."

15.3.3 Dangerous Substances Safety Management Act

- a) Dangerous substances (Class 1 to 6) : Not regulated.

15.3.4 Act on the Registration and Evaluation of Chemicals (K-REACH)

- a) Toxic Chemical: Not regulated.
- b) Substance subject to authorization: Not regulated.
- c) Prohibited or Restricted Chemical: Not regulated."

15.4 INTERNATIONAL CONVENTIONS

- 15.4.1 Rotterdam Convention on Prior Informed Consent: Not regulated.
- 15.4.2 Stockholm Convention on Persistent Organic Pollutants: Not regulated.
- 15.4.3 Montreal Protocol on Substances that Deplete the Ozone Layer: Not regulated.

15.5 INTERNATIONAL CHEMICAL CONTROL LAWS

- 15.5.1 EINECS (EU): Listed. (EINECS No: 215-283-8)
- 15.5.2 TSCA (US): Listed.
- 15.5.3 ENCS(JAPAN): Listed or exempted.
- 15.5.4 AICS(AUSTRALIA): Listed.
- 15.5.5 DSL/NDSL(CANADA): Listed.
- 15.5.6 IECSC(CHNIA): Listed.

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- 15.5.7 PICCS(PHILIPPINES): Listed.
- 15.5.8 KECL(South Korea): Listed (KECL No: KE-35511)
- 15.5.9 European Union's Registration Evaluation Authorisation and Restriction of Chemicals (EU-REACH(1907/2006))
- a) Annex XIV List of Substances Subject to Authorisation:
No component(s) of this material are listed
- b) Article 59(1) Candidate List of Substances for eventual inclusion in Annex XIV (Authorisation): No components of this material are listed.
- c) Annex XVII Restrictions of Certain Dangerous Substances, Mixtures and Articles:
No component(s) of this material are listed
- d) Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline): Not applicable.
- e) Article 57 Substances of very high concern (SVHC): None of the ingredients listed.
- 15.5.10 Chemical Safety Assessment: No chemical safety assessment has been carried out for the substance/mixture.

NOTE: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16 Other Information

16.1 NFPA 704 Hazard ID

- 16.1.1 "Health=1, Flammability=0, Instability=0
- 16.1.2 Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe
- 16.1.3 Degree of Hazard
- 16.1.4 Health=1 (Exposure would cause irritation with only minor residual injury).
- 16.1.5 Flammability=0 (Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand).
- 16.1.6 Instability=0 (Materials that in themselves are normally stable, even under fire conditions)."

16.2 Indication of changes

- 16.2.1 The Safety Data Sheet has been reviewed and the data therein were revised and laid out according the requirements of the Commission Regulation (EU) No. 878/2020

16.3 Abbreviations and acronyms

- 16.3.1 1272/2008 CLP : Classification, Labelling and Packaging regulation.
- 16.3.2 REACH : Registration, Evaluation and authorisation of chemical substances.
- 16.3.3 DNEL : Derive no effects level
- 16.3.4 PNEC : Predicted no effect concentration

16.4 Key literature references and sources for data

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16.4.1 This Safety Data Sheet was compiled with data and information from the following sources: RTECS, ECOSAR, HSDB, SIDS SIAP, ChemWATCH, CESAR, Chemical DB

16.5 Classification procedure

16.5.1 The mixture classification has been derived based on the classification of the individual components in accordance with the rules set out in Regulation (EC) No 1272/2008 (CLP) as well as the translation tables in Annex VII to the same regulation.

16.6 Training advice: Not applicable

16.7 Further information

16.7.1 The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

16.7.2 This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.

16.7.3 It should not therefore be construed as guaranteeing any specific property of the product.

16.7.4 Contact National Helpdesks, List of Telephone Numbers :

AUSTRIA (Vienna Wien) +43 1 515 61 0, BELGIUM (Brussels Bruxelles) +32 070 245 245, BULGARIA (Sofia) +359 2 9888 205, Croatia +385 1 2348 342 CZECH REPUBLIC (Prague Praha) +420 224 919 293 or +420 224 915 402, DENMARK (Copenhagen) 82 12 12 12, ESTONIA (Tallinn) 112, FINLAND (Helsinki) +358 9 471 977, FRANCE (Paris) +33 1 45 42 59 59, GERMANY (Berlin) +49 30 19240, GREECE (Athens Athinaí) +30 210 77 93 777, HUNGARY (Budapest) +36 80 201 199, ICELAND (Reykjavik) +354 543 2222 or 112, IRELAND (Dublin) +353 1 8379964 or +353 1 809 2166, ITALY (Rome) +39 06 305 4343, LATVIA (Riga) 112 or +371 6704 2473, LITHUANIA (Vilnius) +370 5 236 20 52 or +370 687 53378, Luxembourg +352 70 245 245, MALTA +356 2122 4071, NETHERLANDS (Bilthoven) +31 30 274 88 88, NORWAY (Oslo) 22 591300, POLAND (Gdansk) +48 58301 65 16 or +48 58 349 2831, PORTUGAL (Lisbon Lisboa) 808 250 143, ROMANIA (Bucharest) +40 21 3183606 SLOVAKIA (Bratislava) +421 2 54 77 4166, SLOVENIA (Ljubljana) + 386 41 650 500, SPAIN +34 91 562 04 20(spanish language) or +34 91 768 98 00(You can request to be served in English), SWEDEN (Stockholm) 112 or +46 10 456 6700 (mon-fri 9.00-17.00), UNITED KINGDOM (London) 112 or 0845 4647 (NHS Direct).

16.8 OTHER INFORMATION:

The above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. HANCHANG IND. CO., LTD. shall not be held liable for any damage resulting from handling or from contact with the above product. Each individual should make a determination as to the suitability of the information for their particular purpose(s). Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.

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CUSTOMER SERVICE DEPARTMENT

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