SAFETY DATA SHEET

RENSHAPE® 450 US

Version 1.0  Revision Date: 09/08/2017  SDS Number: 400001012632  Date of last issue: -  Date of first issue: 09/08/2017

SECTION 1. IDENTIFICATION

Product name : RENSHAPE® 450 US

Manufacturer or supplier's details
Company name of supplier : Huntsman Advanced Materials Americas LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America (USA)
Telephone : Non-Emergency: (800) 257-5547
E-mail address of person responsible for the SDS : MSDS@huntsman.com
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use
Recommended use : Article

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Other hazards
Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde, oligomeric reaction products with phenol</td>
<td>9003-35-4</td>
<td>5 - 10</td>
</tr>
<tr>
<td>calcium distearate</td>
<td>1592-23-0</td>
<td>1 - 5</td>
</tr>
<tr>
<td>silicon dioxide</td>
<td>7631-86-9</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.
If inhaled : Get medical attention if symptoms occur.
SAFETY DATA SHEET

RENSHAPE® 450 US

Version 1.0  Revision Date: 09/08/2017  SDS Number: 400001012632  Date of last issue: -  Date of first issue: 09/08/2017

In case of skin contact: Get medical attention if symptoms occur.
In case of eye contact: Get medical attention if irritation develops and persists.
If swallowed: Get medical attention if symptoms occur.
Most important symptoms and effects, both acute and delayed: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media: High volume water jet
Specific extinguishing methods: No data is available on the product itself.
Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid dust formation.
Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Conditions for safe storage: Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid: No materials to be especially mentioned.
Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium distearate</td>
<td>1592-23-0</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>ACGIH</td>
</tr>
<tr>
<td>silicon dioxide</td>
<td>7631-86-9</td>
<td>TWA (Dust)</td>
<td>20 Million particles per cubic foot (Silica)</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Dust)</td>
<td>80 mg/m3 / %SiO2 (Silica)</td>
<td>OSHA Z-3</td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Safety glasses

Skin and body protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Colour : brown

Odour : No data is available on the product itself.

Odour Threshold : No data is available on the product itself.

pH : No data is available on the product itself.

Freezing point : No data is available on the product itself.

Melting point : No data is available on the product itself.
Boiling point: No data is available on the product itself.
Flash point: Not applicable
Evaporation rate: No data is available on the product itself.
Flammability (solid, gas): No data is available on the product itself.
Flammability (liquids): No data is available on the product itself.
Upper explosion limit / Upper flammability limit: No data is available on the product itself.
Lower explosion limit / Lower flammability limit: No data is available on the product itself.
Vapour pressure: No data is available on the product itself.
Relative vapour density: No data is available on the product itself.
Relative density: 0.64
Density: No data is available on the product itself.
Solubility(ies):
Water solubility: insoluble
Solubility in other solvents: No data is available on the product itself.
Partition coefficient: n-octanol/water: No data is available on the product itself.
Auto-ignition temperature: No data is available on the product itself.
Thermal decomposition: No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT): No data is available on the product itself.
Viscosity: No data is available on the product itself.
Explosive properties: No data is available on the product itself.
Oxidizing properties: No data is available on the product itself.
Particle size: No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: No hazards to be specially mentioned.
Conditions to avoid: Avoid creating dust.
Incompatible materials: None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure: No data is available on the product itself.

Acute toxicity

Components:
Formaldehyde, oligomeric reaction products with phenol:
Acute oral toxicityComponents:
LD50 (Rat): > 5,000 mg/kg
calcium distearate:
Acute oral toxicityComponents:
LD50 (Rat): > 10,000 mg/kg
silicon dioxide:
Acute oral toxicityComponents:
LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Components:
silicon dioxide:
Acute inhalation toxicity:
LC50 (Rat, male and female): > 58.8 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Components:
Formaldehyde, oligomeric reaction products with phenol:
Acute dermal toxicity:
LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Components:
silicon dioxide:
Acute dermal toxicity:
LD50 (Rabbit): > 5,000 mg/kg

Acute toxicity (other routes of administration): No data available

Skin corrosion/irritation

Components:
silicon dioxide:
Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
Serious eye damage/eye irritation

**Components:**
silicon dioxide;  
Species: Rabbit  
Result: No eye irritation  
Assessment: No eye irritation  
Method: OECD Test Guideline 405

Respiratory or skin sensitisation

**Components:**
Formaldehyde, oligomeric reaction products with phenol;  
Exposure routes: Skin  
Species: Humans  
Assessment: May cause sensitisation by skin contact.  
Result: May cause sensitisation by skin contact.  
Assessment: No data available

Germ cell mutagenicity

**Components:**
silicon dioxide;  
Genotoxicity in vitro: Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
Genotoxicity in vivo: Application Route: Inhalation  
Dose: 50 mg/m3  
Result: negative

Carcinogenicity

**Components:**
silicon dioxide;  
Species: Rat, (male and female)  
Application Route: Oral  
Exposure time: 103 weeks  
Dose: 1800 - 3200 mg/kg  
Frequency of Treatment: 7 daily  
Method: OECD Test Guideline 453  
Result: negative
Carcinogenicity - Assessment

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Effects on fertility

: No data available

Components:
silicon dioxide:

Effects on foetal development

: Species: Mouse
  Application Route: Oral
  General Toxicity Maternal: No observed adverse effect level: 1,340 mg/kg body weight
  Method: OECD Test Guideline 414
  Result: No teratogenic effects

: Species: Rabbit
  Application Route: Oral
  General Toxicity Maternal: No observed adverse effect level: 1,600 mg/kg body weight
  Method: OECD Test Guideline 414
  Result: No teratogenic effects

: Species: Rat
  Application Route: Oral
  General Toxicity Maternal: No observed adverse effect level: 1,350 mg/kg body weight
  Method: OECD Test Guideline 414
  Result: No teratogenic effects

Reproductive toxicity - Assessment

: No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available
Repeated dose toxicity

Components:
silicon dioxide;
Species: Rat, male and female
NOEC: 4000 - 4500 mg/m3
Application Route: Ingestion
Test atmosphere: dust/mist
Exposure time: 13 Weeks
Number of exposures: 7 d
Method: OECD Test Guideline 413

Repeated dose toxicity - Assessment: No data available

Aspiration toxicity
No data available

Experience with human exposure
General Information: No data available

Inhalation: No data available
Skin contact: No data available
Eye contact: No data available
Ingestion: No data available

Toxicology, Metabolism, Distribution
No data available

Neurological effects
No data available

Further information

Product:
Remarks: No data available
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:
silicon dioxide:
Toxicity to fish : LL50 (Brachydanio rerio (zebrafish)): > 10,000 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Components:
silicon dioxide:
Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): >= 1,000 mg/l
Exposure time: 24 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Components:
silicon dioxide:
Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : No data available
Toxicity to fish (Chronic toxicity) : No data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : No data available
M-Factor (Chronic aquatic toxicity) : No data available
Toxicity to microorganisms : No data available
Toxicity to soil dwelling organisms : No data available
Plant toxicity : No data available
Sediment toxicity : No data available
Toxicity to terrestrial organisms : No data available
SAFETY DATA SHEET

RENSHAPE® 450 US

Version 1.0  Revision Date: 09/08/2017  SDS Number: 400001012632  Date of last issue: -  Date of first issue: 09/08/2017

Ecotoxicology Assessment
Acute aquatic toxicity : No data available
Chronic aquatic toxicity : No data available
Toxicity Data on Soil : No data available
Other organisms relevant to the environment : No data available

Persistence and degradability
Biodegradability : No data available
Biochemical Oxygen Demand (BOD) : No data available
Chemical Oxygen Demand (COD) : No data available
BOD/COD : No data available
ThOD : No data available
BOD/ThOD : No data available
Dissolved organic carbon (DOC) : No data available
Physico-chemical removability : No data available
Stability in water : No data available
Photodegradation : No data available
Impact on Sewage Treatment : No data available

Bioaccumulative potential
Bioaccumulation : No data available
Partition coefficient: n-octanol/water : No data available

Mobility in soil
Mobility : No data available
Distribution among environmental compartments : No data available
Stability in soil : No data available
SAFETY DATA SHEET

RENSHAPE® 450 US

Version 1.0  Revision Date: 09/08/2017  SDS Number: 400001012632  Date of last issue: -
Date of first issue: 09/08/2017

Other adverse effects
Environmental fate and pathways: No data available
Results of PBT and vPvB assessment: No data available
Endocrine disrupting potential: No data available
Adsorbed organic bound halogens (AOX): No data available

Hazardous to the ozone layer
Ozone-Depletion Potential: Not applicable
Additional ecological information - Product Global warming potential (GWP): No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA
Not regulated as dangerous goods

IMDG
Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

DOT Classification
Not regulated as dangerous goods
SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65
WARNING: This product can expose you to chemicals including formaldehyde, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH INV</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>DSL</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>AICS</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>NZIoC</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>ENCS</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>KECl</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>PICCS</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>IECSC</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>TCSI</td>
<td>Exemptions from the obligation to register</td>
</tr>
<tr>
<td>TSCA</td>
<td>Exemptions from the obligation to register</td>
</tr>
</tbody>
</table>

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHHL (Japan), KECl (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals
No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No substances are subject to TSCA 12(b) export notification requirements.
SECTION 16. OTHER INFORMATION

Further information

NFPA:

HMIS® IV:

- HEALTH: 0
- FLAMMABILITY: 1
- PHYSICAL HAZARD: 0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "**" represents a chronic hazard, while the "/'" represents the absence of a chronic hazard.

Revision Date: 09/08/2017

ACGIH: USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-3: USA. Occupational Exposure Limits (OSHA) - Table Z-3
Mineral Dusts
ACGIH / TWA: 8-hour, time-weighted average
OSHA Z-3 / TWA: 8-hour time weighted average

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN
PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.