SECTION 1. IDENTIFICATION

Product name: DT 081 FILLER 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: Fillers

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Carcinogenicity (Inhalation): Category 1A
Specific target organ toxicity - repeated exposure (Inhalation): Category 2 (Lungs)

GHS label elements
Hazard pictograms: 

Signal word: Danger
Hazard statements: H350i May cause cancer by inhalation.
H373 May cause damage to organs (Lungs) through prolonged or repeated exposure if inhaled.

Precautionary statements: Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/
Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>quartz (SiO2)</td>
<td>14808-60-7</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: Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Treat symptomatically.
Get medical attention if symptoms occur.

If inhaled: Call a physician or poison control centre immediately.
If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of eye contact: Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed: None known.

Notes to physician: Treat symptomatically.
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 hazards during firefighting: No information available.

Hazardous combustion products: Carbon oxides
Silicon oxides
Metal oxides

Specific extinguishing methods: No data is available on the product itself.

Further information: No action shall be taken involving any personal risk or without suitable training.

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: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling: Avoid formation of respirable particles. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage:
- Keep container tightly closed in a dry and well-ventilated place.
- Observe label precautions.
- Keep in properly labelled containers.

Further information on storage stability:
- Stable under normal conditions.

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>quartz (SiO2)</td>
<td>14808-60-7</td>
<td>TWA (respirable)</td>
<td>10 mg/m³ / %SiO2+2</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>250 mppcf / %SiO2+5</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>0.025 mg/m³ (Silica)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable dust)</td>
<td>0.05 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection:
- In the case of dust or aerosol formation use respirator with an approved filter.
- Dust safety masks are recommended when the dust concentration is more than 10 mg/m³.

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

Eye protection:
- Eye wash bottle with pure water
- Tightly fitting safety goggles

Skin and body protection:
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures:
- When using do not eat or drink.
- When using do not smoke.
- Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
- particles

Colour:
- light grey
Odour: odourless

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

pH: No data is available on the product itself.

Melting point: 1,200 °C

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

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

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: 0.6 - 0.95

Density: 0.35 - 0.45 g/cm3

Bulk density

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: Dust may form explosive mixture in air.
Conditions to avoid: None known.
Incompatible materials: None known.
Hazardous decomposition products: Carbon oxides
Silicon oxides
Metal oxides

SECTION 11. TOXICOLOGICAL INFORMATION

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

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

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available
Assessment: No data available

Germ cell mutagenicity
Genotoxicity in vitro: No data available
Genotoxicity in vivo: No data available

Carcinogenicity
Components:
quartz (SiO2):
Species: Rat
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 6 hour
Result: positive
Target Organs: Lungs

Species: Mouse
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1.95 mg/m³
Frequency of Treatment: 8 hour
Result: negative

Components:
quartz (SiO2):
Carcinogenicity -
Assessment  Positive evidence from human epidemiological studies (inhalation)

IARC  Group 1: Carcinogenic to humans
quartz (SiO2)

ACGIH  Suspected human carcinogen
quartz (SiO2)

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
Effects on foetal development  No data available
Reproductive toxicity - Assessment  No data available

STOT - single exposure
No data available

STOT - repeated exposure
Components:
quartz (SiO2):
Exposure routes: inhalation (dust/mist/fume)
Target Organs: Lungs
Assessment: May cause damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity**
No data available

Repeated dose toxicity - : No data available
Assessment

**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**
Ingestion: No data available

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**
Toxicity to fish : No data available

Toxicity to daphnia and other aquatic invertebrates : No data available

Toxicity to algae : No data available

M-Factor (Acute aquatic) : No data available
<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish (Chronic toxicity)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</td>
<td>No data available</td>
</tr>
<tr>
<td>M-Factor (Chronic aquatic toxicity)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to microorganisms</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to soil dwelling organisms</td>
<td>No data available</td>
</tr>
<tr>
<td>Plant toxicity</td>
<td>No data available</td>
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<tr>
<td>Sediment toxicity</td>
<td>No data available</td>
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<tr>
<td>Toxicity to terrestrial organisms</td>
<td>No data available</td>
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<tr>
<td>Ecotoxicology Assessment</td>
<td></td>
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<tr>
<td>Acute aquatic toxicity</td>
<td>No data available</td>
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<tr>
<td>Chronic aquatic toxicity</td>
<td>No data available</td>
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<tr>
<td>Toxicity Data on Soil</td>
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<tr>
<td>Other organisms relevant to the environment</td>
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</tr>
</tbody>
</table>

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradability</td>
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</tr>
<tr>
<td>Biochemical Oxygen Demand (BOD)</td>
<td>No data available</td>
</tr>
<tr>
<td>Chemical Oxygen Demand (COD)</td>
<td>No data available</td>
</tr>
<tr>
<td>BOD/COD</td>
<td>No data available</td>
</tr>
<tr>
<td>ThOD</td>
<td>No data available</td>
</tr>
<tr>
<td>BOD/ThOD</td>
<td>No data available</td>
</tr>
<tr>
<td>Dissolved organic carbon (DOC)</td>
<td>No data available</td>
</tr>
<tr>
<td>Physico-chemical removability</td>
<td>No data available</td>
</tr>
<tr>
<td>Environmental Fate and Pathways</td>
<td>Details</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Stability in water</td>
<td>No data available</td>
</tr>
<tr>
<td>Photodegradation</td>
<td>No data available</td>
</tr>
<tr>
<td>Impact on Sewage Treatment</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**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

**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**: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
  - Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
- **Additional ecological information**: No data available
- **Global warming potential (GWP)**: No data available
SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

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: Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
California Prop. 65
WARNING: This product can expose you to chemicals including quartz (SiO2), 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:

CH INV : The formulation contains substances listed on the Swiss Inventory, On the inventory, or in compliance with the inventory
DSL : All components of this product are on the Canadian DSL
AICS : On the inventory, or in compliance with the inventory
NZIoC : Not in compliance with the inventory
ENCS : Not in compliance with the inventory
KECI : On the inventory, or in compliance with the inventory
PICCS : On the inventory, or in compliance with the inventory
IIECSC : On the inventory, or in compliance with the inventory
TCSI : On the inventory, or in compliance with the inventory
TSCA : On the inventory, or in compliance with the inventory

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (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: Flammability
HEALTH FLAMMABILITY PHYSICAL HAZARD
0 1 0

HMIS® IV:

HEALTH FLAMMABILITY PHYSICAL HAZARD
* 2 1 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 : 01/04/2018
SAFETY DATA SHEET

DT 081 FILLER US

Version: 1.0  Revision Date: 01/04/2018  SDS Number: 400001012726  Date of last issue: -  Date of first issue: 01/04/2018

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA : 8-hour, time-weighted average
OSHA Z-1 / TWA : 8-hour time weighted average
OSHA Z-3 / TWA : 8-hour time weighted average

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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.

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