

DI-100 RENEWABLE DIESEL ISOMERIZATION CATALYST**F88391**

Version 1.1

Revision Date 10/31/2012

Print Date 11/26/2012

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DI-100 RENEWABLE DIESEL ISOMERIZATION CATALYST

MSDS Number : F88391

Product Use Description : Catalyst

Company : UOP LLC
25 E. Algonquin Road
Des Plaines, IL 60017-5017
USA

Telephone : +1-847-391-2000
Telefax : +1-847-391-2953

In case of emergency call : Medical (PROSAR): 1-800-498-5701 or +1-651-523-0309
: Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887

: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : pellets

Color : off-white

Odor : none

Hazard Summary : Repeated or prolonged exposure may irritate eyes, skin and respiratory system.

Potential Health Effects

Skin : Prolonged skin contact may cause skin irritation.

Eyes : Repeated or prolonged exposure may cause eye irritation.

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- Ingestion : The product is considered to have a low order of oral toxicity.
- Inhalation : Exposure to dust particles generated from this material may cause irritation of the respiratory tract.
- Chronic Exposure : Prolonged or repeated inhalation may cause lung damage.
- Primary Routes of Entry : Contact with skin and eyes.
Exposure may also occur via inhalation or ingestion if product dust is generated.

Carcinogenicity

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, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Chemical Name	CAS-No.	Concentration
Silicon oxide (synthetic)	7631-86-9	<95.00 %
Aluminum oxide (non-fibrous)	1344-28-1	<30.00 %
Platinum	7440-06-4	<5.00 %

SECTION 4. FIRST AID MEASURES

- Inhalation : Remove to fresh air. If symptoms persist, call a physician.
- Skin contact : Wash off with soap and plenty of water. If skin irritation persists, call a physician.
- Eye contact : Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a physician.

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Ingestion : Do NOT induce vomiting. Obtain medical attention.

Notes to physician

Treatment : Toxicity following ingestion is believed to be low. Treat symptomatically. Hydrocarbons and other materials that contact the product during normal use can be retained on the product.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Not combustible.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific hazards during firefighting : The product itself does not burn.
The used product can retain material of a hazardous nature.
Identify that material and inform the fire fighters.
- Special protective equipment for firefighters : Wear suitable protective clothing.
In the case of respirable dust and/or fumes, use self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : For personal protection see section 8.
- Environmental precautions : No special environmental precautions required.
- Methods for cleaning up : Sweep, shovel or vacuum spilled product into appropriate containers (do not use a vacuum if material has contacted a hydrocarbon material).
Pick up and arrange disposal without creating dust.
Never return spills in original containers for re-use.
Spilled product should be disposed of in accordance with all applicable government regulations.
UOP can assist you in arranging for the recovery of precious metals.

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SECTION 7. HANDLING AND STORAGE**Handling**

Handling : Handle and open container with care.
 Avoid dust formation.
 Avoid contact with skin and eyes.
 Take precautionary measures against static discharges.

Storage

Requirements for storage areas and containers : Store in original container.
 Keep tightly closed in a dry and cool place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Handle in accordance with good industrial hygiene and safety practice.

Engineering measures : Ensure adequate ventilation, especially in confined areas.

Eye protection : Safety glasses
 Safety goggles

Hand protection : Protective gloves

Skin and body protection : Lightweight protective clothing

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
 Air-purifying respirator with NIOSH classification N-95 filter or P-95 (or equivalent) if oil/liquid aerosols are present (42 CFR 84).

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis

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Silicon oxide (synthetic)	7631-86-9	REL : Recomm ended exposure limit (REL):	6 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
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Silicon oxide (synthetic)	7631-86-9	TWA : time weighted average	6 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
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Silicon oxide (synthetic)	7631-86-9	TWA : time weighted average	0.8 mg/m3 The exposure limit is calculated from the equation, 80/(%SiO ₂), using a value of 100% SiO ₂ . Lower values of % SiO ₂ will give higher exposure limits.	2000	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000)
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Aluminum oxide (non-fibrous)	1344-28-1	TWA : time weighted average	1 mg/m3	2009	ACGIH:US. ACGIH Threshold Limit Values
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Further information	:	Form of exposure : Respirable fraction.			
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Aluminum oxide (non-fibrous)	1344-28-1	PEL : Permissi ble exposure limit	15 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
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Further information	:	Form of exposure : Total dust.			
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Aluminum oxide (non-fibrous)	1344-28-1	PEL : Permissible exposure limit	5 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Further information	:	Form of exposure : Respirable fraction.			
Aluminum oxide (non-fibrous)	1344-28-1	TWA : time weighted average	10 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Total dust.			
Aluminum oxide (non-fibrous)	1344-28-1	TWA : time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Form of exposure : Respirable fraction.			
Platinum	7440-06-4	TWA : time weighted average	1 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values
Platinum	7440-06-4	REL : Recommended exposure limit (REL):	1 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Platinum	7440-06-4	TWA : time weighted average	1 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Further information	:	Expressed as : as Pt			

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: pellets
Color	: off-white
Odor	: none
pH	: Note: not applicable
Melting point/freezing point	: > 400 °C
Boiling point/boiling range	: Note: not applicable
Flash point	: Note: not applicable
Density	: > 2 g/cm ³
Water solubility	: Note: insoluble
Solubility in other solvents	: Note: no data available
Bulk density	: Note: For further information, refer to the product technical data sheet.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: Stable
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Incompatible materials to avoid : Free water may damage the product.

Hazardous decomposition products : Hydrocarbons and other materials that contact the product during normal use can be retained on the product. It is reasonable to expect that decomposition products will come from these retained materials of use.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : Note: no data available

Acute inhalation toxicity : Note: no data available

Acute dermal toxicity : Note: no data available

Skin irritation : Note: no data available

Eye irritation : Note: no data available

Further information : Note: Avoid repeated exposure.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : Note: no data available

Toxicity to daphnia and other aquatic invertebrates : Note: no data available

Toxicity to algae : Note: no data available

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Elimination information (persistence and degradability)

Bioaccumulation : Note: no data available

Mobility : Note: no data available

Biodegradability : Note: no data available

Further information on ecology

Additional ecological information : No information on ecology is available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : This product (in its fresh unused state) is not listed by generic name or trademark name in the U.S. EPA's RCRA regulations and does not possess any of the four identifying characteristics of hazardous waste (ignitability, corrosivity, reactivity or toxicity).
The used product can contain material of a hazardous nature. Identify that material and dispose accordingly.
UOP can assist you in arranging for the recovery of precious metals.

SECTION 14. TRANSPORT INFORMATION**DOT** Not dangerous goods**TDG** Not dangerous goods**IATA** Not dangerous goods**IMDG** Not dangerous goods**SECTION 15. REGULATORY INFORMATION**

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Inventories

- US. Toxic Substances Control Act : On TSCA Inventory
- Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory
- Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL list.
- Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory
- Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory
- Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory
- China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory
- New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

- SARA 302 Components** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 313 Components** : 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.

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SARA 311/312 Hazards : No SARA Hazards

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts RTK : Silicon oxide (synthetic) 7631-86-9
 : Aluminum oxide (non-fibrous) 1344-28-1
 : Platinum 7440-06-4

New Jersey RTK : Silicon oxide (synthetic) 7631-86-9
 : Aluminum oxide (non-fibrous) 1344-28-1
 : Platinum 7440-06-4

Pennsylvania RTK : Silicon oxide (synthetic) 7631-86-9
 : Aluminum oxide (non-fibrous) 1344-28-1
 : Platinum 7440-06-4

WHMIS Classification : Not Rated
 This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 1	1
Flammability	: 0	0
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by: Honeywell Performance Materials and Technologies Product Stewardship Group