


1 Identification

- **Product identifier**
- **Trade name: FCC ACHIEVE® 400-10512**
- **Application of the substance / the preparation:** Catalyst
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
GRACE
W. R. Grace & Co.-Conn
7500 Grace Drive
Columbia MD 21044
U. S. A.
- **Information department:**
Health and Safety (9 AM to 5 PM-EST) 1-410-531-4000
MSDS.Davison@grace.com
- **Emergency telephone number:**
Chemtrec North America: +1-800-424-9300
Chemtrec International: +1-703-527-3887
Other Emergencies (24hr): +1-410-531-4000

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** None
- **Hazard pictograms** None
- **Signal word** None
- **Hazard statements** None
- **Precautionary statements**
Do not breathe dust.
IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
Collect spillage.
Store in accordance with local/regional/national/international regulations.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**


Health = 1
Fire = 0
Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

HEALTH	*1
FIRE	0
REACTIVITY	0

Health = *1
Fire = 0
Reactivity = 0
- * Product presents long-term adverse effects.
- **Hazard not otherwise classified**
The product is very adsorbent and may have a drying effect on skin and eyes.
Contains ~1% naturally occurring quartz that is bound in the product matrix reducing free respirable crystalline silica to <0.1%.
WARNING. Contains a substance known to the State of California to cause cancer.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Crystalline aluminosilicate with binders.


· **CAS No. and description:**

92704-41-1	Kaolin, calcined	25-50%
1344-28-1	aluminum oxide (non-fibrous forms)	10-25%
1318-02-1	zeolite (crystalline aluminosilicate)	10-25%
7631-86-9	amorphous silicon dioxide, chemically prepared	10-25%
	rare earth oxides	≤1%
	Silica, crystalline (non respirable form)	≤ 1%

· **List of Dangerous Components**

Silica, crystalline (airborne particles of respirable size)	 Carc. 1A, H350	<0.1%
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· **Impurities and stabilizing additives:**

Silica, crystalline (airborne particles of respirable size)	 Carc. 1A, H350	
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· **Additional information:**

The EPA has designated that non-fibrous forms of aluminum oxide are not a toxic chemical, under Section 313 of SARA

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove contaminated clothing if necessary to prevent direct skin contact.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Generally the product does not irritate the skin.
Immediately flush skin with water for at least 15 minutes.
If skin irritation occur, consult a doctor.
- **After eye contact:**
Flush opened eye with large quantities of running water for at least 30 minutes. If symptoms occur, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Seek medical attention. Do not induce vomiting.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Hazardous combustion products**
In case of fire, the following can be released:
Metal oxide fume

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- **Advice for firefighters**
- **Protective equipment:**
Wear personal protective equipment.
Wear respiratory protective device.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Vacuuming or wet sweeping may be used to avoid dust dispersal.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Prevent formation of dust.
Keep receptacles tightly sealed.
Provide suction extractors if dust is formed.
Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.
Take precautionary measures against static discharges.
- **Information about protection against explosions and fires:**
When transferring this material into flammable solvents, use proper grounding to avoid static electric sparks.
The product is not flammable.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

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7631-86-9 amorphous silicon dioxide, chemically prepared

IDLH	Short-term value: 3000 mg/m ³ IDLH: Immediately Dangerous to Life or Health
PEL	Long-term value: 80/%SiO ₂ mg/m ³ OSHA TWA for amorphous silica
REL	Long-term value: 6 mg/m ³ NIOSH TWA
TLV	Long-term value: 10* 5** mg/m ³ ACGIH TWA *Total dust **Respirable fraction

1344-28-1 aluminum oxide (non-fibrous forms)

PEL	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m ³ as Al; *as respirable fraction

Additional Occupational Exposure Limit Values for possible hazards during processing:

Dust inhalable

PEL	Long-term value: 15 mg/m ³ TWA
REL	Long-term value: 15 mg/m ³ TWA

Dust respirable

PEL	Long-term value: 5 mg/m ³ TWA
REL	Long-term value: 5 mg/m ³ TWA

Additional information:

Valid lists at time of creation were used as basis.
Occupational exposure limits to respirable crystalline silica are not expected to be exceeded during normal, foreseeable conditions of fresh product use, as recommended by GRACE. Exposure to respirable dust and respirable crystalline silica should be monitored and controlled during other conditions.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Use suitable respiratory protective device in case of insufficient ventilation. As appropriate for the employee exposure, use a NIOSH approved respirator and cartridge.
Use NIOSH-approved equipment with APF = 10 or better when dust is present.

Protection of hands:



Protective gloves

Wear gloves for the protection against mechanical hazards.
Use gloves of stable material (e.g. Nitrile)

Material of gloves

Butyl rubber, BR

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Nitrile rubber, NBR

- **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR
Nitrile rubber, NBR

- **Eye protection:**



Safety glasses

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Powder
Color: Beige

- **Odor:** Odorless
- **Odor threshold:** Not available.

- **pH-value at 20 °C (68 °F):** 5.0

- **Change in condition**

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

- **Conditions of flammability**

Flash point: Not available.

- **Flammability (solid, gaseous):** Product is not flammable.
- **Ignition temperature:** Not available.
- **Decomposition temperature:** Not available.

- **Auto igniting:** Product is not self-igniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: - Vol %
Upper: - Vol %

- **Vapor pressure at 20 °C (68 °F):** - hPa

- **Density:**

Bulk density at 20 °C (68 °F): 800 kg/m³
Vapor density Not applicable.

Evaporation rate Not applicable.

- **Solubility in / Miscibility with**

Water: Insoluble.

- **Coefficient of water/oil distribution:** Not available.

- **Viscosity:**

Dynamic at 20 °C (68 °F): - mPas

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· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
In case of thermal decomposition caused by smouldering and incomplete combustion toxic fumes may be developed.
- **Incompatible materials:** Protect from contamination.
- **Hazardous decomposition products:** Metal oxide smoke

11 Toxicological information

- **Information on the likely routes of exposure**
- **Delayed and immediate effects and chronic effects from short or long term exposure**
- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

92704-41-1 Kaolin, calcined

Oral	LD50	>5000 mg/kg (rat) (EPA OPP 81-1) comparable material
Dermal	LD50	>5000 mg/kg (rat) (EPA OPP 81-2) comparable material
Inhalative	LC50 (4 h)	>2.07 mg/l (rat) (EPA OPP 81-3)

1318-02-1 zeolite (crystalline aluminosilicate)

Oral	LD50	> 5110 mg/kg (rat) (OECD 401)
Dermal	LD50	>5000 mg/kg (rabbit) (OECD 402)
Inhalative	LC0	> 3350 mg/m ³ /4h (rat) IUCLID Dataset 18-Feb-2000

7631-86-9 amorphous silicon dioxide, chemically prepared

Oral	LD50	>5000 mg/kg (rat) (OECD 401)
Dermal	LD50	>6000 mg/kg (rabbit) (no guidance available)
Inhalative	LC0	>140->2000 mg/m ³ /4h (rat) (OCED 403) Maximum attainable concentration, mortality does not appear.

1344-28-1 aluminum oxide (non-fibrous forms)

Oral	LD50	>10000 mg/kg (rat) (OECD 401)
Inhalative	LC50 (4 h)	>2.3 mg/l (rat) (OECD 403)

rare earth oxides

Oral	LD50	9968 mg/kg (rat) Nd ₂ O ₃ < 1000 mg/kg CeO ₂ < 1000 mg/kg Pr ₆ O ₁₁ < 2500 mg/kg (Toxicology and Applied Pharmacology 5, 750 ff; Dangerous Properties of Industrial Materials, 7th Edition, Vol. II)
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· Primary irritant effect:

· on the skin:

92704-41-1 Kaolin, calcined		
Irritation of skin	IS	0 (rabbit) (OECD 404) comparable substance
1318-02-1 zeolite (crystalline aluminosilicate)		
Irritation of skin	IS	0 (rabbit) (OECD 404)
7631-86-9 amorphous silicon dioxide, chemically prepared		
Irritation of skin	IS	0 (rabbit) (OECD 404)
1344-28-1 aluminum oxide (non-fibrous forms)		
Irritation of skin	IS	<0.160 (rabbit) (OECD 404)

· on the eye:

92704-41-1 Kaolin, calcined		
Irritation of eyes	IS	<0.33 (rabbit) (EPA OPP 870.2400) comparable substance
1318-02-1 zeolite (crystalline aluminosilicate)		
Irritation of eyes	IS	0.7-1.3 (rabbit) (OECD 405) Corneal opacity
7631-86-9 amorphous silicon dioxide, chemically prepared		
Irritation of eyes	IS	0 (rabbit) (OECD 405)
1344-28-1 aluminum oxide (non-fibrous forms)		
Irritation of eyes	IS	0 (rabbit)

· Skin sensitization

92704-41-1 Kaolin, calcined		
Sensitization	SI	<0.72 (mouse) (OECD 429) highest concentration: 25% comparable substance
1344-28-1 aluminum oxide (non-fibrous forms)		
Sensitization	SI	0 (guinea pig)

· Additional toxicological information:

WARNING. Contains a substance known to the State of California to cause cancer.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)		
1318-02-1	zeolite (crystalline aluminosilicate)	3
7631-86-9	amorphous silicon dioxide, chemically prepared	3
	Silica, crystalline (airborne particles of respirable size)	1

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Repeated dose toxicity

1318-02-1 zeolite (crystalline aluminosilicate)		
Oral	NOAEL (90 d)	250-300 mg/kg bw/day (rat) subchronic oral repeated dose
7631-86-9 amorphous silicon dioxide, chemically prepared		
Oral	NOAEL (90 d)	9000 mg/kg bw/day (rat) (OECD 408)

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Inhalative	NOAEC (90 d)	1 mg/m ³ (rat) (OECD 413)
1344-28-1 aluminum oxide (non-fibrous forms)		
Oral	NOAEL (90 d)	30 mg/kg bw/day (rat) (OECD 426/452) comparable substance
Inhalative	NOAEC (90 d)	70 mg/m ³ (rat) (OECD 413)

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

· Carcinogenicity

1318-02-1 zeolite (crystalline aluminosilicate)		
Oral	NOAEL	≥ 1000 ppm (rat)

· Mutagenicity

92704-41-1 Kaolin, calcined		
	AMES Test	>0.5 mg/plate (Salmonella typhimurium) (OECD 471) negative with and without metabolic activation comparable substance

1318-02-1 zeolite (crystalline aluminosilicate)		
Oral	CHO	>0.5 mg/kg bw (rat) (OECD 474) no genotoxic effects
	AMES Test	>0.1 mg/plate (Salmonella typhimurium) (OECD 471) negative with and without metabolic activation
	Mouse Lymphoma Test	>0.08 mg/ml (L5178Y) (OECD 476) no genotoxicity; cytotoxicity >0,02 mg/ml (without metabolic activation); >0,08 with metabolic activation
	CHO	0.067 mg/l (Chinese Hamster Ovary) (OECD 473) cytotoxic 0,0671-0,725 mg/l without metabolic activation; 0,313-0,4 with metabolic activation

7631-86-9 amorphous silicon dioxide, chemically prepared		
	AMES Test	>5 mg/plate (in-vitro) (OECD 471) negative, with and without metabolic activation ECHA 2012

1344-28-1 aluminum oxide (non-fibrous forms)		
	AMES Test	>5 mg/plate (Salmonella typhimurium) (OECD 471) comparable substance negative with and without metabolic activation

· Reproductive toxicity

1318-02-1 zeolite (crystalline aluminosilicate)		
Oral	NOAEL (maternal toxicity)	≥ 1600 mg/kg bw/day (rat) (OECD 414) ≥ 1600 mg/kg bw/day (rabbit) (OECD 414)
	NOAEL (teratogenicity)	≥ 1600 mg/kg bw/day (rat) (OECD 414) ≥ 1600 mg/kg bw/day (rabbit) (OECD 414)

7631-86-9 amorphous silicon dioxide, chemically prepared		
Oral	NOAEL (maternal toxicity)	1350 mg/kg bw/day (rat) (OECD 414)
	NOAEL (teratogenicity)	1350 mg/kg bw/day (rat) (OECD 414)

1344-28-1 aluminum oxide (non-fibrous forms)		
Oral	NOAEL (maternal toxicity)	>90 mg/kg bw/day (rat) (OECD 422) comparable substance
	NOAEL (teratogenicity)	>266 mg/kg bw/day (rat) (OECD 414) comparable substance

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· **Specific target organ toxicity (single exposure)****1344-28-1 aluminum oxide (non-fibrous forms)**

Oral	C	>2000 mg/kg bw (rat) nothing to report in observed organs
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· **Specific target organ toxicity (repeated exposure)****1344-28-1 aluminum oxide (non-fibrous forms)**

Oral	C	>100 mg/kg bw (rat) nothing to report in observed organs
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12 Ecological information· **Toxicity**· **Aquatic toxicity:**· **Fish toxicity****92704-41-1 Kaolin, calcined**

LC50 (96 h)	≥100 mg/l (zebra fish) (OECD 203) comparable substance
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1318-02-1 zeolite (crystalline aluminosilicate)

LC50 (96 h)	>680 mg/l (Pimephales promelas) (EPA 660/3-75/009)
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7631-86-9 amorphous silicon dioxide, chemically prepared

LC0 (96 h) (static)	10000 mg/l (zebra fish) (OECD 203)
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1344-28-1 aluminum oxide (non-fibrous forms)

LC50 (96 h)	>218.64 mg/l (Pimephales promelas) (ASTM 2000 (E729-96)) comp. substance
NOEC (96 h)	>0.072 mg/l (Salmo trutta) (OECD 203)

· **Water flea toxicity****92704-41-1 Kaolin, calcined**

EC0 (48h)	>100 mg/l (Daphnia magna) (OECD 202) comparable substance
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1318-02-1 zeolite (crystalline aluminosilicate)

EC50 (24 h)	2808 mg/l (Daphnia magna) (OECD 202)
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7631-86-9 amorphous silicon dioxide, chemically prepared

EC50 (24 h)	> 1000 mg/l (Daphnia magna) (OECD 202)
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1344-28-1 aluminum oxide (non-fibrous forms)

NOEC (96 h)	>0.071 mg/l (Daphnia magna) (OECD 202)
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· **Algae toxicity****92704-41-1 Kaolin, calcined**

EC50 (72 h)	>100 mg/l (Scenedesmus subspicatus) (OECD 201) comparable substance
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1318-02-1 zeolite (crystalline aluminosilicate)

EC50 (96h)	>328 mg/l (Scenedesmus subspicatus) (OECD 201)
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7631-86-9 amorphous silicon dioxide, chemically prepared

EC50 (72 h)	> 10000 mg/l (Scenedesmus subspicatus) (OECD 201) comparable substance
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1344-28-1 aluminum oxide (non-fibrous forms)

NOEC (72 h)	>0.052 mg/l (Selenastrum capricornutum) (OECD 201)
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· Bacterial toxicity	
1318-02-1 zeolite (crystalline aluminosilicate)	
EC50 (16h)	950 mg/l (Pseudomonas putida) (DIN 38412/8)

- **Persistence and degradability** No further relevant information available.
- **Other information:**
By the insolubility in water there is a separation at every filtration and sedimentation process. The product is chemically and biologically inert.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** Non significant accumulation in organisms
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Recommendation:**
Disposal must be made according to official regulations.

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State/provincial and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state/provincial and local requirements.

- **Waste disposal key:**
Reworking of the Equilibrium Fluid Catalyst is possible. For details contact our local representative.

14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	None
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	None
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	None
· Packing group	
· DOT, ADR, IMDG, IATA	None
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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· **Transport/Additional information:** Not dangerous according to the above specifications.
GRACE recommendation for air transport: Cargo aircraft only.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA**

· **SARA 302/304**

None of the ingredients is listed.

· **SARA 313**

None of the ingredients is listed.

- **SARA 311/312** Delayed (Chronic) Health Hazard.

· **TSCA (Toxic Substances Control Act):**

EPA has defined zeolites as complex chemical products consisting of silica (SiO₂) and alumina (Al₂O₃), in various proportions, plus metallic oxides and certain cations. Zeolites are considered for TSCA purposes to be statutory mixtures of the substances used to manufacture them. Catalysts are considered for TSCA purposes to be mixtures of the oxides related to the manufacturing process.

92704-41-1	Kaolin, calcined
7631-86-9	amorphous silicon dioxide, chemically prepared
1344-28-1	aluminum oxide (non-fibrous forms)
	rare earth oxides
	Silica, crystalline (non respirable form)
	Silica, crystalline (airborne particles of respirable size)

· **Proposition 65**

· **Chemicals known to cause cancer:**

Silica, crystalline (airborne particles of respirable size)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

1344-28-1 | aluminum oxide (non-fibrous forms)

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canadian DSL**

Zeolites are considered for DSL purposes to be mixtures of the substances used to manufacture them.
Catalysts are considered for DSL purposes to be mixtures of the oxides related to the manufacturing process.

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92704-41-1	Kaolin, calcined
7631-86-9	amorphous silicon dioxide, chemically prepared
1344-28-1	aluminum oxide (non-fibrous forms)
	rare earth oxides
	Silica, crystalline (non respirable form)
	Silica, crystalline (airborne particles of respirable size)

• **Canadian NDSL** Not available.

• **European EINECS**

All ingredients are listed or exempted from listing.

• **Philippines Inventory of Chemicals and Chemical Substances PICCS**

All ingredients are listed or exempted from listing.

• **Inventory of the Existing Chemical Substances manufactured or imported in China IECSC**

All ingredients are listed.

• **Australian Inventory of Chemical Substances AICS**

All ingredients are listed or exempted from listing.

• **Existing and New Chemical Substance List ENCS**

92704-41-1	Kaolin, calcined	1-26
1318-02-1	zeolite (crystalline aluminosilicate)	1-26
7631-86-9	amorphous silicon dioxide, chemically prepared	1-548
1344-28-1	aluminum oxide (non-fibrous forms)	1-23
	rare earth oxides	1-560
	Silica, crystalline (non respirable form)	
	Silica, crystalline (airborne particles of respirable size)	

• **Korean Existing Chemical Inventory KECI**

92704-41-1	Kaolin, calcined	KE-21773
1318-02-1	zeolite (crystalline aluminosilicate)	KE-35511
7631-86-9	amorphous silicon dioxide, chemically prepared	KE-31032
1344-28-1	aluminum oxide (non-fibrous forms)	KE-01012
	rare earth oxides	KE-35504
	Silica, crystalline (non respirable form)	*
	Silica, crystalline (airborne particles of respirable size)	*

• **TCSCA (Taiwan)**

92704-41-1	Kaolin, calcined	EPEP4A01713958
1318-02-1	zeolite (crystalline aluminosilicate)	EPEP4A01713969
7631-86-9	amorphous silicon dioxide, chemically prepared	EPEP4A01648271
1344-28-1	aluminum oxide (non-fibrous forms)	EPEP4A01713813

• **GHS label elements** None

• **Hazard pictograms** None

• **Signal word** None

• **Hazard statements** None

• **Precautionary statements**

Do not breathe dust.

IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

Collect spillage.

Store in accordance with local/regional/national/international regulations.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Information about limitation of use:**

Employment restrictions concerning young persons must be observed.

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Trade name: FCC ACHIEVE® 400-10512

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Employment restrictions concerning pregnant and lactating women must be observed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H350 May cause cancer.

- **Department issuing SDS:** GRACE Safety & Health Department

- **Other information:**

Handling the used catalyst needs special care. For this please check our separate Safety Data Sheet for Equilibrium Fluid Cracking Catalyst.

The applicable regulations and industrial hygiene standards have to be considered.

- **Tarif number** 38151990

- **Contact:**

SALES OFFICES

USA:

GRACE

W. R. Grace & Co.-Conn

7500 Grace DR

Columbia, MD 21044

Tel: +1 410-531 4000

Europe:

Grace GmbH & Co. K.G.

In der Hollerhecke 1

Postfach 1445

D-67545 Worms, Germany

Tel: +49 6241 4030

Asia Pacific:

Grace Products (Singapore) Pte Ltd

230 Orchard Road

09-232, Faber House

Singapore 238854

Tel: +65 6737 3033

Fax: +65 6737 5826

Grace Trading (Shanghai) Ltd

19th Floor K.Wah Center

1010 Huai Hai Zhong Road

Shanghai, 200031 China

T (电话): +86 21 3325 8288

F (传真): +86 21 5405 1500

W. R. Grace Japan K.K

Kohken New River Bldg 3F

2-21-18, Shinkawa

Chuo-ku, Tokyo 104-0033

JAPAN

Tel: +81 3.3537.6006

Fax: +81 3.3537.6007

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Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Carc. 1A: Carcinogenicity – Category 1A

*** Data compared to the previous version altered.**

USA