



SAFETY DATA SHEET

According to 29 CFR 1910.1200(g)

C-GRID 450

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name C-GRID 450

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

Product Use Industrial use as a reinforcing mesh for cementitious grouts.

Restricted Use Not intended for use by general public.

1.3. Details of the supplier of the safety data sheet

Company Denso North America

Address 9747 Whithorn Drive
Houston, TX 77095

Web www.densona.com

Telephone 1 (281) 821-3355

Fax 1 (281) 821-0304

Email info@densona.com

1.4. Emergency telephone number

Emergency telephone number (24 Hour) 1-801-629-0667

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

2.1.1. Health This product is considered an "article" as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered "manufactured articles" as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS. Under normal conditional of use, this product does not pose a hazard in the workplace or to the building occupants. Since this product or "article" poses no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, "articles" are not included in the scope of the Globally Harmonized System (GHS). For that reason, the GHS labeling elements are not included in this SDS. Although this product is not subject to these labeling elements, Denso would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of this product. It is recommended that this SDS should be retained and made available to the users of this product. In addition, the recommendations for handling and use of this product should be included in worker training programs.

2.1.2. Environmental None required.

2.1.3. Physical None required.

2.2. Label elements

Hazard pictograms None required.

Signal Word None required.



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Hazard statement	None required.
Precautionary Statement: Prevention	No significant hazard. H264 – Wash thoroughly after handling
Precautionary Statement: Response	None required.
Precautionary Statement: Disposal	P501 – Dispose of material in accordance with local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical Name	CAS No.	Concentration (%w/w)	Classification
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NOTES: This material does not meet the criteria of a substance.

SECTION 4: First aid measures

4.1. General advice	First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Treat symptomatically and supportively, as required. Seek medical advice/attention as needed.
4.2. Eye contact	First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Immediately flush eyes with plenty of water for at least 15 minute, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Treat symptomatically and supportively, as required. Seek medical advice/attention as needed.
4.3. Skin contact	First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Treat symptomatically and supportively, as required. Wash skin with soap and water. Use a wash cloth to help remove fibers. Do not rub or scratch irritated areas. Seek medical advice/attention as needed.
4.4. Ingestion	First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Treat symptomatically and supportively, as required. Seek medical advice/attention as needed. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
4.5 Inhalation	First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Treat symptomatically and supportively, as required. Seek medical advice/attention as needed. If not breathing, if breathing is irregular or if



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respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

4.6. Most important symptoms and effects, both acute and delayed

Eye contact

Like all solids, mechanical irritation and damage from fibers or dust may occur should contact with the eye occur. Not expected under normal conditions of use.

Skin contact

May cause mechanical irritation from fibers or dust. Dermatitis possible. Chronic skin conditions may be aggravated.

Ingestion

Although ingestion is very unlikely, the product may cause nausea and vomiting should ingestion occur.

Inhalation

Product is solid at room temperature. Inhalation may cause difficulty breathing or suffocation in sufficient quantities. Mechanical irritation and sensitization to the respiratory tract may occur from fibers or dust. Chronic respiratory conditions may be aggravated. Not expected under normal conditions of use.

SECTION 5: Firefighting measures

5.1. Suitable extinguishing media

Alcohol-resistant foam, Carbon dioxide (CO₂), Dry chemical, Dry sand, Limestone powder. Do not use a solid water stream as it may scatter and spread fire.

5.2. Specific hazards

Decomposition products may include the following materials: carbon oxides, nitrogen oxides, phenols, hydrocarbons. Downwind personnel must be evacuated. Burning produces noxious and toxic fumes. Airborne carbon fibers or dust may create electrical short-circuits which could result in damage to or malfunctioning of electrical equipment.

5.3. Special protective equipment for fire-fighters

Avoid contact with skin. Fire-fighters should wear appropriate personal protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

5.4. Further information

Do not allow run-off from fire-fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled materials. Put on appropriate personal protective equipment (see Section 8).

6.2. Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).



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- 6.3. Methods for cleaning up Prevent entry into sewers or water courses. Collect spillage by sweeping/picking up.
- 6.4. Additional advice Stop leak if without risk.

SECTION 7: Handling and storage

- 7.1. Handling Put on appropriate personal protective equipment (see Section 8). Adopt best manual handling practices when handling, carrying and dispensing. Wash thoroughly after handling. KEEP OUT OF REACH OF CHILDREN. Airborne carbon fibers or dust may create electrical short-circuits which could result in damage to or malfunctioning of electrical equipment.
- 7.2. Storage Store in accordance with local regulations. Store in original container protected from direct sunlight in a cool, well-ventilated area, away from electrical equipment, sparks, flames, heat and sources of ignition.
- 7.3. Technical precautions Do not store in reactive metal containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values	CAS No.	ACGIH TLV
	7440-44-0	3 mg/m ³ (respirable) / 10 mg/m ³ (total)
	65997-17-3	1 f/cc (respirable) / 5 mg/m ³ (inhalable)

8.2. Control measures / Personal Protection

- 8.2.1. Recommended monitoring procedures To meet the exposure limits for the materials listed above, 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.
- 8.2.2. Engineering measures Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 8.2.3. Hygiene measures Wash hands, forearms, and face after handling chemical products, before eating, smoking or using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing or discard as necessary. Ensure that eyewash stations/bottles with pure water and safety showers are close to the workstation location.
- 8.2.4. Respiratory protection Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.



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8.2.5. Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. This may include, but is not limited to, safety glasses, goggles and face shields.
8.2.6. Skin protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. This equipment may include, but is not limited to, impervious gloves, gauntlets, impervious shoes/boots, and protective clothing. The breakthrough time of the selected protective glove(s), shoes and clothing must be greater than the intended use period.
8.2.7. Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Environmental exposure controls may also include dikes or other liquid containment devices.

SECTION 9: Physical and chemical properties

Form	Fibrous mesh	Vapor Pressure	ND
Color	Black	Relative vapor density	ND
Odor	Mild	Relative density	>1.5
Odor threshold	ND	Water solubility	Negligible
pH	about 7	Partition coefficient (n-octanol/water)	ND
Freezing point	ND	Auto-ignition temperature	ND
Boiling point	ND	Decomposition temperature	ND
Flash Point	ND	Viscosity	ND
Evaporation rate	N/A	Oxidizing	N/A
Flammable Limits	ND	Explosion Limits	ND

SECTION 10: Stability and reactivity

10.1 Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
10.2. Conditions to avoid	Temperatures greater than 300°F (149°C); Avoid flames, sparks or other sources of ignition.
10.3. Materials to avoid	No data available.
10.4. Other hazards	Airborne carbon fibers or dust may create electrical short-circuits which could result in damage to or malfunctioning of electrical equipment.
10.5. Hazardous decomposition products	Decomposition products may include the following materials: Carbon oxides, hydrocarbons, nitrogen oxides, phenols, noxious/toxic fumes

SECTION 11: Toxicological information



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11.1. Acute health hazard	Product: This material is an article that does not release or otherwise result in exposure to a hazardous chemical under normal use.
11.2. Skin corrosion or irritation	Product: No data available. Possible mechanical irritation and dermatitis.
11.3. Serious eye damage or irritation	Product: No data available. Possible mechanical irritation.
11.4. Respiratory or skin sensitization	Product: No data available. Possible skin sensitization.
11.5. Germ cell mutagenicity	Product: No data available.
11.6. Carcinogenicity	Product: No data available.
11.7. Reproductive toxicity	Product: No data available.
11.8. STOT – single exposure	Product: No data available.
11.9. STOT – repeated exposure	Product: No data available.
11.10. Repeated dose toxicity	Product: No data available.
11.11. Aspiration toxicity	Product: No data available.
11.12. Further information	Likely routes of exposure – skin contact.

SECTION 12: Ecological information

12.1. Ecotoxicity	Product: No data available.
12.2. Persistence and degradability	Product: No data available.
12.3. Bioaccumulative potential	Product: No data available.
12.4. Mobility in soil	Product: No data available.



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12.5. Other adverse effects **Product:** No data available.

SECTION 13: Disposal considerations

13.1. Waste disposal The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Avoid disposal of spilled material and runoff and contaminated soils in waterways, drains or sewers. Dispose of contaminated containers, soils, etc. in compliance with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Empty any remaining contents from packaging prior to disposal and dispose of as unused product. Do not reuse empty containers.

SECTION 14: Transport information

14.1. UN number	Not regulated
14.2. UN proper shipping name	Not regulated
14.3. Transport hazard class	
International Carriage of Dangerous Good by Road/Rail	ADR/RID: Not Regulated
International Maritime Dangerous Goods	IMDG: Not Regulated
International Air Transport Association	IATA: Not Regulated
US Code of Federal Regulations	CFR: Not Regulated
Canadian Transportation of Dangerous Goods	TDG: Not Regulated
US Department of Transportation	DOT: Not Regulated
14.4. Packing group	Not Regulated
14.5. Environmental hazards	Not Regulated

SECTION 15: Regulatory information

15.1. OSHA Hazards	None
15.2. CERCLA Reportable Quantity	Components: None CAS No.: Component RQ: Product RQ:



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15.3. SARA 314 Extremely Hazardous Substances Reportable Quantity	This material does not contain any components with section 314 EHS RQ.
15.4. SARA 311/312 Hazards	None
15.5. SARA Title III, Section 302 Reporting	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
15.6. SARA Title III, Section 313 Reporting	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313
15.7. Clean Air Act	<p>The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61): None</p> <p>This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).</p> <p>The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489): None</p>
15.8. Clean Water Act	<p>The following Hazardous Substances are listed under the U.S. Clean Water Act, Section 311, Table 116.4A: None</p> <p>The following Hazardous Substances are listed under the U.S. Clean Water Act, Section 311, Table 117.3: None</p> <p>This product contains the following toxic pollutants listed under the U.S. Clean Water Act, Section 307: None</p>
15.9. US State Regulations	<p>Massachusetts, Pennsylvania, New Jersey Right-To-Know None</p> <p>California Prop 65 WARNING! This product contains no chemical known to the State of California to cause cancer.</p>
15.10. International Chemical Inventory Listing	
TSCA (US)	Yes (All components of this product are on US inventory)
DSL (Canada)	Yes (All components of this product are on Canadian inventory)
AICS (Australia)	Yes (On Australian inventory or in compliance with inventory)
ICS (New Zealand)	Yes (On New Zealand inventory or in compliance with inventory)
ENCS (Japan)	Yes (On Japanese inventory or in compliance with inventory)
ISHL (Japan)	Yes (On Japanese inventory or in compliance with inventory)
KECI (Korea)	Yes (On Korean inventory or in compliance with inventory)



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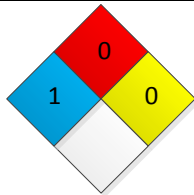
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PICCS (Philippines) Yes (On Philippine inventory or in compliance with inventory)
IECSC (China) Yes (On Chinese inventory or in compliance with inventory)

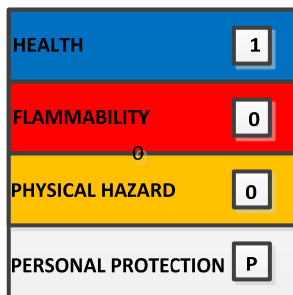
15.11. WHMIS Hazard Classification (Canada)
None required.
Canadian NPRI: None required.

SECTION 16: Other information

16.1. NFPA



16.2. HMIS®



Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS ratings are not required on SDS's under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS ratings are to be used with a fully implemented HMIS program. HMIS is a registered mark of the National Paint & Coatings Association (NPCA). HMIS materials may be purchased exclusively from J.J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

16.3. Text of Risk phrases in Section 3
None.

16.4. Text of Hazard statements in Section 3
None.

16.5. Notice to Reader
The information provided herein was believed by Denso North America ("Denso") to be accurate at the time of preparation and prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Denso are subject to Denso's terms and conditions of sale. DENSO MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MECHANABILITY OR FITNESS THEREOF FOR



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16.6. Key/Legend to abbreviations and acronyms used in the safety data sheet

ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY DENSO, except that the product shall conform to Denso's specifications. Nothing contained herein constitutes an offer for the sale of any product.

ACGIH	American Conference Government Industrial Hygienists
AICS	Australia, Inventory of Chemical Substances
DSL	Canada, Domestic Substances List
NDSL	Canada, Non-Domestic Substances List
CAS	Chemical Abstract Service
CNS	Central Nervous System
EC50	Effective Concentration 50%
EGEST	EOSCA Generic Exposure Scenario Tool
EOSCA	European Oilfield Specialty Chemicals Association
EINECS	European Inventory of Existing Chemical Substances
ENCS	Japan, Inventory Existing and New Chemical Substances
GHS	Global Harmonization System
IDLH	Immediately Dangerous to Life or Health Concentrations
IARC	International Agency for Research on Cancer
IC50	Inhibition Concentration 50%
IECSC	Inventory of Existing Chemical Substances in China
KECI	Korea, Existing Chemical Inventory
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
LOAEL	Lowest Observed Adverse Effect Level
MAK	Germany Maximum Concentration Values
N/A	Not Applicable
ND	Not Determined
NFPA	National Fire Protection Agency
NIOSH	National Institute for Occupational Safety & Health
NOAEL	No Observable Adverse Effect Level
NOEC	No Observed Effect Concentration
NTP	National Toxicology Program
NZIoC	New Zealand Inventory of Chemicals
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limit
PICCS	Philippines Inventory Commercial Chemical Substances
PRNT	Presumed Not Toxic
RCRA	Resource Conservation Recovery Act
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-Term Exposure Limit
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
WHMIS	Workplace Hazardous Materials Information System



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16.7. Prepared by

Denso EH & S Department

16.8. Telephone

1-281-821-3355 Corporate
1-801-629-0667 Emergency (24 hour)