SDS no. PID1146
Version 10
Revision date 18/May/2017
Supersedes date 15/Oct/2015

Safety Data Sheet
NUT PLUG* (All Grades)

1. Identification

1.1 Product identifier

Product name NUT PLUG* (All Grades)

Product code PID1146

Synonyms NUT PLUG* FINE, NUT PLUG* MEDIUM, NUT PLUG* COARSE

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

Recommended Use Lost circulation material.

Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier
M-I L.L.C.
P.O.Box 42842
Houston, TX 77242
www.miswaco.slb.com
Telephone: 1 281-561-1511

M-I SWACO, A Schlumberger Company
200 - 125, 9th Avenue SE
Calgary, Alberta T2G 0P6, Canada
Telephone: 1-780-962-8221

E-mail address SDS@slb.com

Prepared by
Global Regulatory Compliance - Chemicals (GRC - Chemicals)

1.4 Emergency Telephone Number

Emergency telephone (24 Hour) Asia Pacific +65 3158 1074, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, USA +1 281 561 1600, Canada +1 800 579 7421, Argentina: +54 11 5984 3690, Brazil : 0800-720-8000 0800-777-2323 (WGRA)

2. Hazards identification

2.1 Classification of the substance or mixture

GHS - Classification

Health hazards

Carcinogenicity	Category 1A

Environmental hazards Not classified

Physical Hazards

Combustible dust

2.2 Label elements

Signal word
DANGER

Hazard statements
H350 - May cause cancer
H232 - May form combustible dust concentrations in air

Precautionary statements
P201 - Obtain special instructions before use
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P309 + P311 - IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician
P370 + P378 - In case of fire: Use dry sodium carbonate to extinguish
P403 + P235 - Store in a well-ventilated place. Keep cool

P202 - Do not handle until all safety precautions have been read and understood
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified
None known

Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity.

3. Composition/information on Ingredients

3.1 Substances

Chemical Name	CAS No	Weight-%
Cellulose	9004-34-6	60 - 100
Crystalline silica (impurity)	14808-60-7	<1

3.2 Mixtures

Not applicable

Comments
Percentages (concentrations) represented as a range are due to batch-to-batch variability.

4. First aid measures

4.1 First aid measures

Inhalation — If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion — Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Seek medical attention if irritation occurs.

Skin contact — Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.

Eye Contact — Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

General advice — The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

Symptoms

Inhalation — Please see Section 11. Toxicological Information for further information.

Ingestion — Please see Section 11. Toxicological Information for further information.

Skin contact — Please see Section 11. Toxicological Information for further information.

Eye contact — Please see Section 11. Toxicological Information for further information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician — Treat symptomatically

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water Fog, Alcohol Foam, CO_2, Dry Chemical.

Extinguishing media which must not be used for safety reasons
None known.

5.2. Special hazards arising from the substance or mixture Special hazards arising from the substance or mixture

Unusual fire and explosion hazards
Suspended dust may present a dust explosion hazard.

Hazardous combustion products
Carbon oxides (COx).

5.3 Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear.

Special Fire-Fighting Procedures
Containers close to fire should be removed immediately or cooled with water.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment identified in Section 8. Evacuate and ventilate the area. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Prevent further leakage or spillage if safe to do so.

6.2 Environmental precautions

The product should not be allowed to enter drains, water courses or the soil. As local regulations may vary; all waste must be disposed/recycled/reclaimed in accordance with federal, state, and local environmental control regulations.

Environmental exposure controls
Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading.

Methods for cleaning up
Shovel into suitable container for disposal. Take precautionary measures against static discharges. Avoid dust formation. Powdered material may form explosive dust-air mixtures.

6.4 Reference to other sections

See section 13 for more information.

7. Handling and storage

7.1 Precautions for safe handling

Handling
Use personal protective equipment as required. Avoid contact with skin, eyes and clothing. Avoid dust formation in confined areas. Fine dust dispersed in air may ignite. Avoid breathing dust; if exposed to high dust concentration, leave area immediately.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Keep airborne concentrations below exposure limits. Use spark-proof tools and explosion-proof equipment. Ensure adequate ventilation.

Storage precautions Keep container/package tightly closed and in a well-ventilated place.

8. Exposure controls/personal protection

8.1 Control parameters

Exposure limits **No biological limit allocated**

Component	ACGIH TLV	OSHA PEL
Cellulose	10 mg/m³	15 mg/m³ TWA

9004-34-6 (60 - 100)		5 mg/m³ TWA
Crystalline silica (impurity) 14808-60-7 (<1)	0.025 mg/m³	50 µg/m³ TWA respirable fraction

Crystalline silica (impurity)
OSHA - Final PELs - Table Z-3 Mineral Dusts
(250)/(%SiO2 + 5) mppcf TWA, respirable fraction; (10)/(%SiO2 + 2) mg/m³ TWA, respirable fraction

8.2 Exposure controls

A risk assessment is recommended to be performed by a qualified and trained personnel to analyze the worksite and recommends the appropriate controls such as engineering controls, work practice controls, and administrative controls as primary means of reducing employee exposure. When there is a remaining hazards after applying the primary controls, Personal Protective Equipment (PPE) must be used.

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering Controls
Apply technical measures to comply with the occupational exposure limits. Keep airborne concentrations below exposure limits.

Personal protective equipment

Eye protection	Tightly fitting safety goggles.
Hand protection	Use protective gloves made of: Neoprene Nitrile Frequent change is advisable
Respiratory Protection	All respiratory protection equipment should be used within a comprehensive respiratory protection program that meets the requirements of 29 CFR 1910.134 (U.S. OSHA Respiratory Protection Standard) or local equivalent.If exposed to airborne particles of this product use at least a NIOSH-approved N95 half-mask disposable or re-useable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or re-useable particulate respirator.
Skin and body protection	Wear suitable protective clothing, Eye wash and emergency shower must be available at the work place.
Hygiene measures	Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Transparent
Color	Tan - Brown
Odor	Odorless
Odor threshold	Not applicable

Property	**Values**	**Remarks**
pH		
pH @ dilution		
Melting / freezing point	No information available	
Boiling point/range	No information available	
Flash point	193 °C / 380 °F	PMCC
Evaporation rate (BuAc =1)	No information available	
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit	No information available	

Lower flammability limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	1.1 - 1.4 sg	@ 20 °C
Bulk density	577–641 kg/m3 / 36–40 lb/ft3	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available Not applicable	
Dynamic viscosity	No information available	
log Pow	No information available	
Explosive properties	Suspended dust may present a dust explosion hazard	
Oxidizing properties	None known.	

9.2 Other information

Pour point	No information available
Molecular weight	No information available
VOC content(%)	None
Density	No information available

Comments
The data listed above are typical physical and chemical properties that do not constitute product specification. Please refer to Technical Data Sheet for specifications.

10. Stability and reactivity

10.1 Reactivity

Dust may form explosive mixture in air.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization
Hazardous polymerization does not occur.

10.4 Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation

Inhalation of dust in high concentration may cause irritation of respiratory system. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Repeated or prolonged inhalation of crystalline silica dust can cause delayed lung injury, and other

diseases, including silicosis and lung cancer.

Eye contact Dust contact with the eyes can lead to mechanical irritation.

Skin contact Contact with dust can cause mechanical irritation or drying of the skin.

Ingestion Irritant; may cause pain or discomfort to mouth, throat and stomach.

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cellulose	> 5 g/kg (Rat)	> 2 g/kg (Rabbit)	> 5800 mg/m³ (Rat) 4 h
Crystalline silica (impurity)	= 500 mg/kg (Rat)	No data available	No data available

Chemical Name	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Cellulose	No data available	No data available	No data available	Known Human Carcinogen
Crystalline silica (impurity)	Group 1; Monograph 100C [2012] Monograph 100C [2012] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources); Monograph 68 [1997] Group 1; Monograph 68 [1997]	A2 Suspected Human Carcinogen	Present	Known Human Carcinogen

Sensitization Not classified.

Mutagenic effects This substance has no evidence of mutagenic properties.

Carcinogenicity Contains a known or suspected carcinogen. Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled.

Reproductive toxicity No evidence of toxicity to reproduction.

Developmental toxicity Not known to cause birth defects or have a deleterious effect on a developing fetus.

Routes of exposure Inhalation. Skin contact. Eye contact.

Routes of entry Inhalation.

Specific target organ toxicity - Single exposure Not classified

Specific target organ toxicity - Repeated exposure Not classified.

Target organ effects Respiratory system.

Aspiration hazard Not applicable.

12. Ecological information

12.1 Toxicity

Toxicity to algae
This product is not considered toxic to algae.

Toxicity to fish
This product is not considered toxic to fish.

Toxicity to daphnia and other aquatic invertebrates
This product is not considered toxic to invertebrates.

Chemical Name	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Cellulose	No information available	No information available	No information available
Crystalline silica (impurity)	No information available	No information available	No information available

12.2 Persistence and degradability

Not Applicable - Inorganic chemical.

12.3 Bioaccumulative potential

Not Applicable - Inorganic chemical.

12.4 Mobility in soil

Insoluble in water.

12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

12.6 Other adverse effects.

None known.

13. Disposal considerations

13.1 Waste treatment methods

Disposal Method Disposal should be made in accordance with federal, state and local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport information

14.1. UN number

Not regulated

UN No. (DOT) Not regulated
UN No. (TDG) Not regulated
UN/ID No. (ADR/RID/ADN/ADG) Not regulated
UN No. (IMDG) Not regulated
UN No. (ICAO) Not regulated

14.2. UN proper shipping name

The product is not covered by international regulation on the transport of dangerous goods

14.3 Hazard class(es)

DOT Hazard class Not regulated
TDG Hazard class Not regulated

ADR/RID/ADN/ADG Hazard class	Not regulated
IMDG Hazard class	Not regulated
ICAO Hazard class/division	Not regulated

14.4 Packing group

DOT Packing group	Not regulated
TDG Packing group	Not regulated
ADR/RID/ADN/ADG Packing group	Not regulated
IMDG Packing group	Not regulated
ICAO Packing group	Not regulated

14.5 Environmental hazard
No

14.6 Special precautions
Not applicable

14.7 Transport in bulk according to Annex I/II of MARPOL 73/78 and the IBC Code
Please contact MISDS@slb.com for info regarding transport in Bulk.

15. Regulatory information

International inventories

USA (TSCA)	Complies
Canada (DSL)	Complies
European Union (EINECS and ELINCS)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

U.S. Federal and State Regulations

SARA 311/312 Hazard Categories
Delayed (chronic) health hazard. Fire Hazard (Combustible Dust)

SARA 302/304, 313, CERCLA RQ, California Proposition 65
Note: If no components are listed below, this product is not subject to the referenced SARA and CERCLA regulations and is not known to contain a Proposition 65 listed chemical at a level that is expected to pose a significant risk under anticipated use conditions.

Chemical Name	SARA 302 / TPQs	SARA 313	CERCLA RQ
Cellulose	N/A	N/A	N/A
Crystalline silica (impurity)	N/A	N/A	N/A

State Comments
Proposition 65: This product contains chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 to cause cancer and/or reproductive toxicity. See table under U.S. Federal and State Regulations for the specific chemicals.

Canadian Classification

This Safety Data Sheet has been prepared in compliance with the Hazardous Products Regulations.

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16. Other information

Supersedes date	15/Oct/2015
Revision date	18/May/2017
Version	10
This SDS has been revised in the following section(s)	1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING 2. Hazards Identification 3. Composition/information on Ingredients 6. Accidental release measures 7. Handling and storage 8. EXPOSURE CONTROLS / PERSONAL PROTECTION 11. Toxicological information 16. Updated according to WHMIS 2015.

HMIS classification

Health	1*
Flammability	1
Physical hazard	0
PPE	E

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