

SAFETY DATA SHEET

1. Identification

Product identifier	USG® Radar™ Basic FIRECODE™ Acoustical Ceiling Panels	
Other means of identification		
SDS number	41999270008	
Additional Products	Radar™ FIRECODE™, CLEAN ROOM™ FIRECODE™, Pebbled™ FIRECODE™, Rock Face™ FIRECODE™, Superpanel™ FIRECODE™, Touchstone™ FIRECODE™, Fifth Avenue™ FIRECODE™, Fissured™ Basic FIRECODE™, FIRECODE™ Plenum Acoustical Ceiling Panels	
Synonyms	Ceiling Tiles, Water Felted Mineral Fiber Ceiling Panels/Tiles	
Recommended use	Interior use.	
Recommended restrictions	Use in accordance with manufacturer's recommendations.	
Manufacturer/Importer/Supplier/	Distributor information	
Company name	United States Gypsum Company	
Address	550 West Adams Street	
	Chicago, Illinois 60661-3637	
Telephone	1-800-874-4968	
Website	www.usg.com	

2. Hazard(s) identification

Emergency phone number 1-800-507-8899

Physical hazards	Not classified.	
Health hazards	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 2 (Lung)
OSHA defined hazards	Not classified.	

Label elements



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ons.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Slag wool fiber	N/A	< 65

Perlite		93763-70-3	< 25
Kaolin		1332-58-7	< 20
Cellulose		9004-34-6	< 10
Starch		9005-25-8	< 10
Limestone		1317-65-3	< 5
Calcium carbonate, synthetic		471-34-1	< 2
npurities			
Chemical name		CAS number	%
Crystalline silica (Quartz)		14808-60-7	< 3
omposition comments	All concentrations are in percent by w	veight.	
	Raw materials in this product contain percent of respirable crystalline silica crystalline silica during the normal us testing.	found in this product is < 3%. Expos	ures to respirable
	Raw materials and/or coatings in this been classified as possibly carcinoge Cancer (IARC). However, per IARC " is thought to occur during the use of such as in paints" (1). See Section 16	nic to humans by the International Aq no significant exposure to primary pa products in which titanium dioxide is I	gency for Research irticles of titanium di
. First-aid measures			
nhalation	Dust irritates the respiratory system, injured person into fresh air and keep symptoms persist.		
kin contact	Contact with dust: Rinse area with ple persists.	enty of water. Get medical attention if	irritation develops of
ye contact	Dust in the eyes: Do not rub eyes. Flu assistance.	ush thoroughly with water. If irritation	occurs, get medica
ngestion	Rinse mouth. Get medical attention if	symptoms occur.	
lost important ymptoms/effects, acute and elayed	Under normal conditions of intended irritate throat and respiratory system effects.	use, this material does not pose a ris	k to health. Dust ma osure may cause ch
ndication of immediate nedical attention and special reatment needed	Provide general supportive measures	and treat symptomatically.	
General information	Ensure that medical personnel are av	vare of the material(s) involved.	
5. Fire-fighting measures			
uitable extinguishing media	Use fire-extinguishing media appropr	iate for surrounding materials.	
	Not applicable.		
Insuitable extinguishing nedia specific hazards arising from ne chemical	Not a fire hazard.		
nedia Specific hazards arising from	Not a fire hazard. Selection of respiratory protection for the workplace. Self-contained breath case of fire.		
nedia specific hazards arising from he chemical special protective equipment nd precautions for firefighters	Selection of respiratory protection for the workplace. Self-contained breath	ing apparatus and full protective cloth	ning must be worn ir
nedia specific hazards arising from he chemical special protective equipment nd precautions for firefighters	Selection of respiratory protection for the workplace. Self-contained breathin case of fire.	and consider the hazards of other inv	iing must be worn ir /olved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	No specific clean-up procedure noted. For waste disposal, see Section 13 of the SDS.
Environmental precautions	Avoid discharge to drains, sewers, and other water systems.
7. Handling and storage	

Precautions for safe handling Use work methods which minimize dust production. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices.

Store away from incompatible materials (see Section 10 of the SDS). Conditions for safe storage, including any incompatibilities

8. Exposure controls/personal protection

Occupational exposure limits

U.S OSHA	T	M. L	E o rmo
Components	Туре	Value	Form
Slag wool fiber	TWA	5 mg/m3	Fiber, respirable (diameter ≤ 3.5 µm and length ≥ 10 µm)
		15 mg/m3	Fiber, total
US. OSHA Specifically Regulated	Substances (29 CFR 1910.1001-10	53)	
mpurities	Туре	Value	
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m3	
US. OSHA Table Z-1 Limits for Air			_
Components	Туре	Value	Form
Calcium carbonate, synthetic (CAS 471-34-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Cellulose (CAS 9004-34-6)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
imestone (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Starch (CAS 9005-25-8)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
JS. OSHA Table Z-3 (29 CFR 1910)	1000)		
Components	Туре	Value	Form
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Perlite (CAS 93763-70-3)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
mpurities	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.

USG® Radar[™] Basic FIRECODE[™] Acoustical Ceiling Panels

US. OSHA Table Z-3 (29 CFR 19 Impurities	Туре	Value	Form
		2.4 mppcf	Respirable.
US. ACGIH Threshold Limit Val	ues		
Components	Туре	Value	Form
Cellulose (CAS 9004-34-6)	TWA	10 mg/m3	
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Slag wool fiber	TWA	1 fibers/cm3	Fiber, respirable (lengt 5 µm and aspect ratio 3:1)
Starch (CAS 9005-25-8)	TWA	10 mg/m3	,
Impurities	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
US. NIOSH: Pocket Guide to Ch			_
Components	Туре	Value	Form
Calcium carbonate, synthetic (CAS 471-34-1)	TWA	5 mg/m3	Respirable.
Synthetic (CAS 471-34-1)		10 mg/m3	Total
Cellulose (CAS 9004-34-6)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Perlite (CAS 93763-70-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Slag wool fiber	TWA	3 fibers/cm3	Fibrous dust.
		3 fibers/cm3	Fiber, respirable (diameter ≤ 3.5 µm and length ≥ 10 µm)
		5 mg/m3	Fiber, total
Starch (CAS 9005-25-8)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Impurities	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
•	o biological exposure limits noted		
trols e: m po	rovide sufficient ventilation for oper posure limits and minimize the ris inimize dust levels. If a router is u ower cutting, power kerfing or usin ee Section 16 for further information	sk of exposure. Cut and trim with sed it must have a dust collection og compressed air to remove dus	a utility knife or hand saw t system. Operations such
vidual protection measures, suc Eye/face protection W	ch as personal protective equip lear approved safety goggles.	ment	
	is a good industrial hygiene practi ontact use suitable protective glov		prolonged or repeated skin
Skin protection Other N	ormal work clothing (long sleeved	shirts and long pants) is recomm	ended

If engineering controls do not maintain airborne concentrations below recommended exposure **Respiratory protection** limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use. Thermal hazards None. **General hygiene** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective considerations equipment separately from regular wash. Observe any medical surveillance requirements.

9. Physical and chemical properties

Appearance

Appearance	
Physical state	Solid.
Form	Panel.
Color	White or colored surface; beige/gray core.
Odor	Low to no odor.
Odor threshold	Not applicable.
рН	9
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	0.31 - 0.34 (H20=1)
Solubility(ies)	
Solubility (water)	Very low solubility in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	2200 °F (1204.4 °C) (Slag wool)
Viscosity	Not applicable.
Other information	
Bulk density	19 - 21 lb/ft³
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC	0 %
10. Stability and reactivity	
Reactivity	The product is stable and non reactive under normal conditions of storage and
Chemical stability	Material is stable under normal conditions.

Hazardous polymerization does not occur.

Possibility of hazardous

reactions

transport.

Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation. Prolonged and repeated exposure to airborne respirable crystalline silica can cause silicosis and/or lung cancer.
Skin contact	May cause irritation through mechanical abrasion.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Ingestion may cause irritation and stomach discomfort.
Symptoms related to the physical, chemical and	Dust may irritate throat and respiratory system and cause coughing.

toxicological characteristics

Information on toxicological effects

Acute toxicity	Not expected to be acute	ly toxic.	
Components	Species	Test Results	
Calcium carbonate, synthetic (CA	S 471-34-1)		
Acute			
Oral			
LD50	Rat	6450 mg/kg	
Kaolin (CAS 1332-58-7)			
Acute			
Dermal			
LD50	Rat	> 5000 mg/kg	
Inhalation			
LC50	Rat	> 2 mg/l, 4 Hours	
Oral			
LD50	Rat	> 5000 mg/kg	
Starch (CAS 9005-25-8)			
Acute			
Dermal			
LD50	Rabbit	> 5000 mg/kg	
Oral			
LD50	Rat	> 50000 mg/kg	
Skin corrosion/irritation	May cause irritation throu	igh mechanical abrasion.	
Serious eye damage/eye irritation	-	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitizatio	n		
Respiratory sensitization	No data available, but no	ne expected.	
Skin sensitization	This product is not expect	ted to cause skin sensitization.	
Germ cell mutagenicity	No data available, but no	ne expected.	
Carcinogenicity	Repeated and prolonged cancer.	exposures to high levels of respirable crystalline silica may cause	
IARC Monographs. Overall	Evaluation of Carcinogen	icity	
Crystalline silica (Quartz NTP Report on Carcinogen		1 Carcinogenic to humans.	
Crystalline silica (Quartz OSHA Specifically Regulat		Known To Be Human Carcinogen. 10.1001-1053)	
Crystalline silica (Quartz	:) (CAS 14808-60-7)	Cancer	
Reproductive toxicity	No data available, but no	ne expected.	

Specific target organ toxicity - single exposure	No data available, but none expected.
Specific target organ toxicity - repeated exposure	May damage lung tissue through repeated and prolonged exposure to high levels of respirable crystalline silica particles.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Chronic effects	Prolonged and routine inhalation of high levels of respirable crystalline silica particles can lead to the lung disease known as silicosis. Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica. Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

12. Ecological information

Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent releases can have a harmful or damaging effect on the environment.

Components		Species	Test Results	
Calcium carbonate, synthetic (CAS 471-34-1)				
Aquatic				
Acute				
Fish	LC50	Mosquitofish (Gambusia affinis affinis)	> 56000 mg/l	
Kaolin (CAS 1332-58-7)				
Aquatic				
Acute				
Crustacea	LC50	Daphnia magna	> 1.1 g/l, 48 Hours	
ersistence and degradability	No data is av	ailable on the degradability of this product.		
oaccumulative potential	Bioaccumulation is not expected.			
obility in soil	No data available.			
ther adverse effects	None expecte	ed.		

13. Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not applicable. This product is a solid. Therefore, bulk transport is governed by IMSBC code.

the IBC Code

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Su	ubstance List (40 CFR	302.4)
Not listed.		
SARA 304 Emergency	release notification	
Not regulated.		
OSHA Specifically Reg	ulated Substances (29	CFR 1910.1001-1053)
Crystalline silica (Qu	uartz) (CAS 14808-60-7) Cancer lung effects immune system effects kidney effects
Toxic Substances Control A	Act (TSCA)	All components on the TSCA 8(b) inventory are designated "active" or are exempt from reporting under the Inventory Update Rule.
Superfund Amendments and Re	eauthorization Act of 1	
SARA 302 Extremely hazar		
Not listed.		
SARA 311/312 Hazardous chemical	Yes	
Classified hazard categories	Carcinogenicity Specific target organ	toxicity (single or repeated exposure)
SARA 313 (TRI reporting)		
Not regulated.		
Other federal regulations		
Clean Air Act (CAA) Section	n 112 Hazardous Air P	ollutants (HAPs) List
Not regulated.		
5	n 112(r) Accidental Rel	lease Prevention (40 CFR 68.130)
Not regulated.		
Safe Drinking Water Act (SDWA)	Not regulated.	
US state regulations		
US. Massachusetts RTK - S	Substance List	
Calcium carbonate, synth Cellulose (CAS 9004-34- Crystalline silica (Quartz) Kaolin (CAS 1332-58-7) Limestone (CAS 1317-65 Perlite (CAS 93763-70-3 Starch (CAS 9005-25-8)	-6)) (CAS 14808-60-7) 5-3)	
US. New Jersey Worker and	d Community Right-to-	Know Act
Calcium carbonate, syntl	,	
Cellulose (CAS 9004-34- Crystalline silica (Quartz) Kaolin (CAS 1332-58-7) Limestone (CAS 1317-65) (CAS 14808-60-7) 5-3)	
Perlite (CAS 93763-70-3		
US. Pennsylvania Worker a Calcium carbonate, syntl		O-KNOW Law
Cellulose (CAS 9004-34-	,	
Crystalline silica (Quartz)) (CAS 14808-60-7)	
Kaolin (CAS 1332-58-7)		
Limestone (CAS 1317-65 Perlite (CAS 93763-70-3		
Starch (CAS 9005-25-8)		
US. Rhode Island RTK		
Calcium carbonate, synth		
Cellulose (CAS 9004-34- Crystalline silica (Quartz)		
Kaolin (CAS 1332-58-7)	1000-00-1)	
Limestone (CAS 1317-65	5-3)	
Slag wool fiber (CAS N/A		
Starch (CAS 9005-25-8)		
USG® Radar™ Basic FIRECODE™ /	Acoustical Ceiling Panels	SDS US

California Proposition 65



WARNING: This product can expose you to chemicals including Crystalline silica (Quartz): Crystalline silica (Quartz), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Listed: October 1, 1988

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Crystalline silica (Quartz) (CAS 14808-60-7)

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Crystalline silica (Quartz) (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Revision date13-November-2019Version #02Further informationSlag Wool Fiber: Large morbidity and mortality studies of both European and North Ame mineral wool manufacturing workers have been conducted. These studies have found no	
Further information Slag Wool Fiber: Large morbidity and mortality studies of both European and North Ame	
significant association of non-malignant (i.e. fibrosis) or malignant (i.e., lung cancer or mesothelioma) lung disease and exposures to slag wool fibers and have not established relationship between exposure and non-malignant or malignant diseases. In 2001, the International Agency for Research on Cancer (IARC) assigned slag wool fib Group 3 category ["not classifiable as to carcinogenicity to humans"]. The synthetic mineral fiber used in this product is exonerated from classification as a car accordance with Note Q in the EU Commission Directive 97/69/EC.	a causal er to the
Crystalline silica: Raw materials in this product may contain respirable crystalline silica a impurity. Exposures to respirable crystalline silica are not expected during the normal us product. However, actual levels must be determined by workplace hygiene testing. Indus hygiene testing by RJ Lee Group showed that cutting with a utility knife or a router equip dust collection system did not produce airborne respirable crystalline in exceedance of C PELs. However, cutting with a power saw, even with a dust collection system in place, di some exceedances. Prolonged and repeated exposure to airborne free respirable crysta can result in lung disease (i.e., silicosis) and/or lung cancer.	e of this strial ped with a DSHA id produce
Titanium dioxide: Raw materials and/or coatings in this product contain small amounts of dioxide. The International Agency for Research on Cancer (IARC) has determined that ti dioxide is possibly carcinogenic to humans (Group 2B) based on inadequate evidence in and sufficient evidence in experimental animals. This conclusion relates to long-term interposure to high concentrations of pigmentary (powdered) or ultrafine titanium dioxide. H no significant exposure to primary particles of titanium dioxide is thought to occur during products in which titanium dioxide is bound to other materials, such as in paints. The ava human studies do not suggest an association between occupational exposure to titanium and risk for cancer. The American Conference of Governmental Industrial Hygienists (ACGIH) has designate chemical as not classifiable as a human carcinogen (A4). The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens.	tanium humans alation However, the use of ailable h dioxide
NFPA Ratings: Health: 1 Flammability: 0 Physical hazard: 0	
NFPA Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe	



References	1.) International Agency for Research on Cancer (IARC). Volume 93: Carbon Black, Titanium Dioxide, and Talc; (5. Summary of data reported). IARC, 2010. Available at: <http: eng="" mono93.pdf="" monographs="" monographs.iarc.fr="" vol93=""></http:>
	2.) North American Insulation Manufacturer's Association (NAIMA). Working Smart with Fiber Glass, Rock Wool and Slag Wool Products. NAIMA, 2007. Available at: http://insulationinstitute.org/wp-content/uploads/2016/02/N059.pdf >
Disclaimer	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.