

T&N, Incorporated

Professional Turf and Ice Melt Products

815 Highway T • P.O. Box 240 • Foristell, MO 63348-0240
Local (636) 673-2505 • Toll Free (866) 670-2505 • Fax (636) 673-2750
E-Mail: tandninc@aol.com www.tandninc.com

MATERIAL SAFETY DATA SHEET

PRODUCT Pelletized Limestone

PRODUCT CODE PL50
DATE PREPARED May 2007

DISTRIBUTOR

T and N, Inc.
815 Hwy. T - P.O. Box 240
Foristell, MO 63348

MATERIAL IDENTIFICATION

CHEMICAL NAME	Limestone	CHEMICAL FORMULA	N/A
MOLECULAR WEIGHT	N/A	TRADE NAME	Crushed Stone
DOT IDENTIFICATION	None		
SYNONYMS	Aggregate, Aglime, Barn Lime, Cover stone, Flexible Base, Fluxing Agent, Manufactured Sand, Mineral Filler, Screenings		

PRODUCT AND COMPONENT DATA

COMPONENT(S)	Limestone*	PERCENT (APPROXIMATE)	100
CAS REGISTRY NUMBER	1317-65-3	EXPOSURE LIMITS	See TOXICITY AND FIRST AID
COMPONENT(S)	*Composition varies naturally - typically contains quartz (crystalline silica).	PERCENT (APPROXIMATE)	>1
CAS REGISTRY NUMBER	14808-60-7	EXPOSURE LIMITS	See TOXICITY AND FIRST AID

PHYSICAL DATA

BOILING POINT (At 1 Atm.)	N/A	SPECIFIC GRAVITY	2.6 - 2.75
VAPOR PRESSURE (mm Hg @20°C)	N/A	VAPOR DENSITY IN AIR (Air - 1)	N/A
SOLUBILITY IN WATER	0	PERCENT VOLATILE, BY VOLUME (@ 100°F)	0%
EVAPORATION RATE (at 1 Atm. And 25°C; n-buty1 acetate-1)	0		

APPEARANCE AND ODOR

Angular gray, white and tan particles ranging in size from powder to boulders. No odor.

REACTIVITY DATE

STABILITY

Stable

CONDITIONS TO AVOID

Avoid contact with incompatible materials (see below).

INCOMPATIBILITY (materials to avoid)

Contact with powerful oxidizing agents such as fluorine, boron tribloride, chlorine trichloride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.

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PRODUCT **Pelletized Limestone**

HAZARDOUS DECOMPOSITION PRODUCTS

Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.

HAZARDOUS POLYMERIZATION

Not known to polymerize

FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT (Method used)

Not Flammable

FLAMMABLE LIMITS IN AIR

Not Flammable

EXTINGUISHING AGENTS

None Required

UNUSUAL FIRE AND EXPLOSION HAZARDS

Contact with powerful oxidizing agents may cause fire and/or explosions (see **REACTIVITY DATA**).

TOXICITY AND FIRST AID

EXPOSURE LIMITS

When exposure to this product and other chemicals is concurrent, the exposure limit must be defined in the workplace. Unless specified otherwise, limits are expressed as eight-hour time-weighted averages (TWA). Limits for cristobalite and tridymite (other forms of crystalline silica) are equal to one-half of the limits for quartz.

ABBREVIATIONS

TLV

Threshold limit value of the American Conference of Governmental Industrial Hygienists (ACGIH)

MSHA PEL

Permissible exposure limit of the Mine Safety and Health Administration (MSHA)

OSHA PEL

Permissible exposure limit of the Occupational Safety and Health Administration (OSHA)

mg/m³

Milligrams of substance per cubic meter of air.

LIMESTONE (Calcium Carbonate)

ACGIH TLV® = 10 mg/m³

OSHA PEL = 15 mg/m³ (total dust)

OSHA PEL = 5 mg/m³ (respirable fraction)

MSHA PEL = 10 mg/m³ (total dust)

OTHER PARTICULATES

2001 ACGIH TLV® = 10 mg/m³ (inhalable/total particulate, not otherwise specified)

2001 ACGIH TLV® = 3 mg/m³ (respirable particulate, not otherwise specified)

OSHA PEL = 15 mg/m³ (total particulate, not otherwise regulated)

OSHA PEL = 5 mg/m³ (respirable particulate, not otherwise regulated)

RESPIRABLE CRYSTALLINE SILICA (SiO₂/quartz)

ACGIH TLV® = 0.05 mg/m³

MSHA and OSHA PEL = 10 mg/m³ + (%SiO₂+2), for respirable dust containing crystalline silica

Total dust, respirable and nonrespirable: 1973 ACGIH TLV® = 30mg/m³ / (%quartz + 3).

Per ACGIH, adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLVs& PELs. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions such as those described below.

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There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with adverse health effects involving the kidney, scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) and other autoimmune disorders. However, this evidence has been obtained primarily from case reports involving individuals working in high exposure situations or those who have already developed silicosis; and therefore, this evidence does not conclusively prove a casual relationship between silica or silicosis and these adverse health effects. Several studies of persons with silicosis also indicate an increased risk of developing lung cancer, a risk that increases with the duration of exposure. Some of these studies of silicosis do not account for lung cancer confounders, especially smoking.

Limestone is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). In October 1996, an IARC Working Group re-assessing crystalline silica, a component of this product, designated respirable crystalline silica as carcinogenic (Group 1). The NTP's Report on Carcinogens, 9th edition, lists respirable crystalline silica as a "known human carcinogen." In the year 2000, the American Conference of Governmental Industrial Hygienists (ACGIH) listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

California Proposition 65: WARNING: This product contains chemical(s) known to the state of California to cause cancer.

PERSONAL PROTECTION AND CONTROLS

RESPIRATORY PROTECTION

For respirable quartz levels that exceed or are likely to exceed an 8-hr TWA of 0.1 mg/m³, a NIOSH approved dust respirator is recommended. For respirable quartz levels that exceed an 8-hr TWA of 0.5 mg/m³, a NIOSH approved HEPA filter respirator is recommended. If respirable quartz levels exceed or are likely to exceed an 8-hr TWA of 5 mg/m³, a NIOSH approved positive pressure, full face respirator or equivalent is recommended. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements.

VENTILATION

Local exhaust or general ventilation adequate to maintain exposures below appropriate exposure limits.

SKIN PROTECTION

See "Hygiene" section below.

EYE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

HYGIENE

Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using toilet facilities. Wash work clothes after each use.

DISCLAIMER

The information and recommendations herein are taken from data contained in independent, industry recognized references including NIOSH, OSHA, ANSI, and NFPA. Thus, T and N, Inc., makes no guarantee, warranty or other representation concerning this substance, since the conditions of its use are beyond the control of the company. T and N, Inc., disclaims any liability for loss or damage incurred in connection with the use of this substance.