

GRACE Davison

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MATERIAL

SAFETY

DATA

SHEET

SAFETY

DATA

REF. NO. 5008

PRODUCT: DAVISON BLUE INDICATING GEL

Emergency Contact:

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The following information includes safety data required by OSHA. The recipient of this safety data is responsible for passing the safety information on so that it reaches the ultimate user who may come in contact with the material.

TRADE NAME:

DAVISON BLUE INDICATING GEL
GRADES 13, 42, 43, 44 & 45

**CHEMICAL NAME
& FAMILY:**

Synthetic Amorphous Silica

SYNONYMS:

Amorphous Silicon Dioxide, Silica Gel, Silicic Acid
TEL-TALE[®] Indicating Gel

**CHEMICAL NOTATION
OR STRUCTURE:**

$\text{SiO}_2 \cdot x\text{H}_2\text{O} + \text{CoCl}_2$

INGREDIENTS:

Amorphous Silica, Cobalt Chloride (CoCl_2)

Synthetic amorphous silica, not to be confused with crystalline silica such as quartz, cristobalite or tridymite or with diatomaceous earth or naturally occurring forms of amorphous silica that frequently contain crystalline forms.

CAS REGISTRY NO:

Silica Gel: 63231-67-4 (Revised 1990 SiO_2 : 112926-00-8)
Cobalt Chloride: 7646-79-9

RTECS NO:

VV7322000 (Silica Gel)
GF9800000 (Cobalt Chloride)

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HEALTH INFORMATION

PRECAUTION IN USE:

Avoid prolonged breathing of dust or contact of dust with the skin. The drying action of this material can cause irritation of the mucous membranes of the nose and throat and irritation of the skin. If its use requires manual handling, wear long sleeves and close-weave cotton gloves with tight-fitting wristlets. If dusty conditions prevail, wear a properly fitted NIOSH-approved dust respirator. Wear goggles if dust causes eye discomfort.

When pouring into a container of flammable liquid, ground both containers electrically to prevent a static electric spark.

FIRST AID:

EYES: Immediately wash from eyes with large amounts of water, occasionally lifting the upper & lower eye lids. If irritation occurs and persists, seek medical attention.

SKIN: Wash with soap & water.

INGESTION: Material will pass through the body normally.

INHALATION: Remove to fresh air.

TOXICOLOGY

ANIMAL TOXICOLOGY

TESTS FOR DOT HAZARD CLASSIFICATION:

48-hour oral LD₅₀ (Rat) est. > 31,600 mg/kg

48-hour dermal LD₅₀ (Rabbit) est. > 2,000 mg/kg

Considered an ocular irritant

TESTS FOR FDA APPROVAL FOR USE IN FOODS:

Not a food-grade product.

HUMAN TOXICOLOGY:

Silica gel is a synthetic amorphous silica not to be confused with crystalline silica. Epidemiological studies indicate low potential for adverse health effects. In the activated form, silica gel acts as a desiccant and can cause a drying irritation of the mucous membranes and skin in cases of severe exposure. Cobalt and cobalt compounds are included on the IARC human carcinogens list. Cobalt chloride can cause dermatitis and irritation of nasal passages and lungs. Davison knows of no medical conditions abnormally aggravated by exposure to this product. The primary route of entry is inhalation.

ENVIRONMENTAL DATA

Not known to have any adverse effect on the aquatic environment. The silica base is insoluble and nontoxic. Cobalt chloride may leach away if contacted with water.

TYPICAL CHEMICAL & PHYSICAL INFORMATION

APPEARANCE:	Clear blue granules
pH IN 5% SLURRY:	Approximately 6.5-7.5
ODOR:	None
SPECIFIC GRAVITY:	2.1
BULK DENSITY:	Approximately 47-48 lbs/ft. ³
SOLUBILITY IN WATER:	Silica gel base insoluble Cobalt chloride may leach out.
APPROXIMATE ANALYSIS:	SiO ₂ (Ignited Basis) - 99.7 (CoCl ₂ sublimes) LOI @ 1760 F - 6.5% Crystalline Silica - Not detectable Cobalt Chloride - 0.9%
STABILITY:	Stable
REACTIVITY:	Reacts with HF
FIRE & EXPLOSION DATA:	Non-flammable

REGULATORY STATUS

OSHA-	Silica gel - PEL = 6 mg/m ₃ Cobalt Chloride - PEL = not listed in 29 CFR 1910.1000.
NIOSH-	Silica Gel - Animal tests conducted in 1976-78. 18 month exposure at 15 mg/m ³ showed silica deposition in respiratory macrophages and lymph nodes, minimum lung function impairment, and no silicosis.
EPA-	This product contains no toxic chemicals in excess of the applicable de minimis concentration as specified under § 313 of Title III SARA.
ACGIH-	Silica Gel - TLV = 10 mg/m ³ (Silica gel); Cobalt Chloride - TLV = not listed.
USDA-	Not applicable.
FDA-	Not a food-grade product. For food or pharmaceutical use, FP grades of Syloid should be specified.
DOT-	Not classified as a hazardous material.

HANDLING INFORMATION

STORAGE AND TRANSPORTATION:	Keep tightly sealed to protect quality.
DISPOSAL:	Dispose in an approved landfill according to federal, state and local regulations. Cover promptly to avoid blowing of dust.
SPILLAGE AND CLEANUP:	Sweep or vacuum up.
CONTAINERS:	Drums, cans.

SPECIAL INFORMATION