



MATERIAL SAFETY DATA SHEET

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DEVIRAN 220 DERRICK GREEN

220D

HAZARDS IDENTIFICATION (ANSI Section 3)

Primary route(s) of exposure : Inhalation, skin contact, eye contact, ingestion.

Effects of overexposure :

Inhalation : Irritation of respiratory tract. Prolonged inhalation may lead to mucous membrane irritation, fatigue, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, diarrhea, abdominal pain, chest pain, coughing, apathy, central nervous system depression, intoxication, metallic taste, anesthetic effect or narcosis, difficulty of breathing, allergic response, fever and chills, dehydration, tremors, pulmonary edema, pneumoconiosis, loss of consciousness, respiratory failure, death. Possible sensitization to respiratory tract.

Skin contact : Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting, severe skin irritation, severe skin irritation or burns. Possible sensitization to skin.

Eye contact : Irritation of eyes. Prolonged or repeated contact can cause conjunctivitis, tearing of eyes, redness of eyes, severe eye irritation, severe eye irritation or burns, corneal injury.

Ingestion : Ingestion may cause lung inflammation and damage due to aspiration of material into lungs, mouth and throat irritation, mucous membrane irritation, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, diarrhea, gastro-intestinal disturbances, abdominal pain, visual disturbances, apathy, central nervous system depression, anesthetic effect or narcosis, difficulty of breathing, burns of the mouth, throat, stomach, pulmonary edema, convulsions, loss of consciousness, respiratory failure, death.

Medical conditions aggravated by exposure : Eye, skin, respiratory disorders, kidney disorders, liver disorders, allergies.

FIRST-AID MEASURES (ANSI Section 4)

Inhalation : Remove to fresh air. Restore and support continued breathing. Get emergency medical attention. Have trained person give oxygen if necessary. Get medical help for any breathing difficulty.

Skin contact : Wash thoroughly with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin. Repeated applications may be needed. Remove contaminated clothing. Wash contaminated clothing before re-use. Dispose of contaminated leather items, such as shoes and belts. If irritation occurs, consult a physician.

Eye contact : Flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.

Ingestion : If swallowed, obtain medical treatment immediately.

FIRE-FIGHTING MEASURES (ANSI Section 5)

Fire extinguishing media : Dry chemical or foam water fog. Carbon dioxide. Closed containers may explode when exposed to extreme heat or fire. Vapors may ignite explosively at ambient temperatures. Vapors are heavier than air and may travel long distances to a source of ignition and flash back. Vapors can form explosive mixtures in air at elevated temperatures. Closed containers may burst if exposed to extreme heat or fire. Dust explosion hazard. May decompose under fire conditions emitting irritant and/or toxic gases.

Fire fighting procedures : Water may be used to cool and protect exposed containers. Firefighters should use full protective clothing, eye protection, and self-contained breathing apparatus. Self-contained breathing apparatus recommended.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide, oxides of nitrogen, acrid fumes, formaldehyde, oxides of sulfur, ammonia, hydrogen cyanide, hydrogen chloride, aldehydes, toxic gases, barium compounds, smoke and soot. Cyanides.

ACCIDENTAL RELEASE MEASURES (ANSI Section 6)

Steps to be taken in case material is released or spilled : Comply with all applicable health and environmental regulations. Eliminate all sources of ignition. Ventilate area with explosion-proof equipment. Spills may be collected with absorbent materials. Use non-sparking tools. Evacuate all unnecessary personnel. Place collected material in proper container. Complete personal protective equipment must be used during cleanup. Large spills - shut off leak if safe to do so. Dike and contain spill. Pump to storage or salvage vessels. Use absorbent to pick up excess residue. Keep salvageable material and rinse water out of sewers and water courses. Small spills - use absorbent to pick up residue and dispose of properly.

HANDLING AND STORAGE (ANSI Section 7)

Handling and storage : Store below 80f. Keep away from heat, sparks and open flame. Keep away from direct sunlight, heat and all sources of ignition.

Other precautions : Use only with adequate ventilation. Do not take internally. Keep out of reach of children. Avoid contact with skin and eyes, and breathing of vapors. Wash hands thoroughly after handling, especially before eating or smoking. Keep containers tightly closed and upright when not in use. Avoid conditions which result in formation of inhalable particles such as spraying or abrading (sanding) painted surfaces. If such conditions cannot be avoided, use appropriate respiratory protection as directed under exposure controls/personal protection. Empty containers may contain hazardous residues. Ground equipment when transferring to prevent accumulation of static charge.

EXPOSURE CONTROLS/PERSONAL PROTECTION (ANSI Section 8)

Respiratory protection : Control environmental concentrations below applicable exposure standards when using this material. When respiratory protection is determined to be necessary, use a NIOSH/MSHA (Canadian z94.4) Approved elastomeric sealing- surface facepiece respirator outfitted with organic vapor cartridges and paint spray (dust/mist) prefilters. Determine the proper level of protection by conducting appropriate air monitoring. Consult 29CFR1910.134 For selection of respirators (Canadian z94.4).

Ventilation : Provide dilution ventilation or local exhaust to prevent build-up of vapors. Use explosion-proof equipment. Use non-sparking equipment.

Personal protective equipment : Eye wash, safety shower, safety glasses or goggles. Impervious gloves, impervious clothing, face shield, apron.

STABILITY AND REACTIVITY (ANSI Section 10)

Under normal conditions : Stable see section 5 fire fighting measures

Materials to avoid : Oxidizers, acids, reducing agents, bases, aldehydes, halogens, amines, nitric acid, combustible materials, lewis acids, mineral acids.

Conditions to avoid : Elevated temperatures, contact with oxidizing agent, storage near acids, sparks, open flame, ignition sources.

Hazardous polymerization : Will not occur

TOXICOLOGICAL INFORMATION (ANSI Section 11)

Supplemental health information : Contains a chemical that is moderately toxic by ingestion.

Contains a chemical that may be absorbed through skin. Notice - reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Contains iron oxide, repeated or prolonged exposure to iron oxide dust may cause siderosis, a benign pneumoconiosis. Other effects of overexposure may include toxicity to liver, kidney, central nervous system, blood.

Carcinogenicity : Inhalation of non-asbestiform cosmetic grade talc for 2 years at 6 and 18 mg/m³ produced clear evidence of carcinogenicity in female rats (lung and adrenal tumors) and some evidence of carcinogenicity in male rats (adrenal tumors). No evidence of carcinogenicity was demonstrated in male and female mice exposed under the same conditions. Microscopic examination of the lungs of rats and mice exposed to talc revealed additional exposure related effects primarily associated with the inflammatory response. Contains formaldehyde, a potential cancer hazard. Rats exposed to formaldehyde via inhalation developed cancer of the nasal cavity. Evidence in humans is limited (nasal and nasopharyngeal cancer). Formaldehyde is listed as a carcinogen by OSHA, probable human carcinogen (group 2a) by IARC, and anticipated human carcinogen by NTP. Overexposure can cause eye, lung, and respiratory tract irritation, and skin and respiratory sensitization. Contains crystalline silica which is considered a hazard by inhalation. IARC has classified crystalline silica as carcinogenic to humans (group 1). Crystalline silica is also a known cause of silicosis, a noncancerous lung disease. The national toxicology program (NTP) has classified crystalline silica as a known human carcinogen. In a lifetime inhalation study, exposure to 250 mg/m³ titanium dioxide resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown but questionable. The international agency for research on cancer (IARC) has classified titanium dioxide as possibly carcinogenic to humans (group 2b) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

Reproductive effects : High exposures to xylene in some animal studies, often at maternally toxic levels, have affected embryo/fetal development. The significance of this finding to humans is not known.

Mutagenicity : No mutagenic effects are anticipated

Teratogenicity : No teratogenic effects are anticipated

ECOLOGICAL INFORMATION (ANSI Section 12)

No ecological testing has been done by ICI paints on this product as a whole.

DISPOSAL CONSIDERATIONS (ANSI Section 13)

Waste disposal : Dispose in accordance with all applicable regulations. Avoid discharge to natural waters.

REGULATORY INFORMATION (ANSI Section 15)

As of the date of this MSDS, all of the components in this product are listed (or are otherwise exempt from listing) on the TSCA inventory. This product has been classified in accordance with the hazard criteria of the CPR (controlled products regulations) and the MSDS contains all the information required by the CPR.

Physical Data (ANSI Sections 1, 9, and 14)

| Product Code | Description | Wt. / Gal. | VOC gr. / ltr. | % Volatile by Volume | Flash Point | Boiling Range | HMIS | DOT, proper shipping name |
|--------------|---|------------|----------------|----------------------|-------------|---------------|------|---------------------------|
| 220B65DGF | devran 220 heavy duty epoxy coating derrick green | 10.06 | 343.38 | 41.86 | 80 f | 244-244 | *330 | UN1263, paint, 3, PGIII |
| 220C0903H | devran 220 heavy duty epoxy coating converter | 12.99 | 425.04 | 49.53 | 80 f | 243-355 | *330 | UN1263, paint, 3, PGIII |

Ingredients Product Codes with % by Weight (ANSI Section 2)

| Chemical Name | Common Name | CAS. No. | 220B65DGF | 220C0903H |
|---|--------------------------------|-------------|-----------|-----------|
| 1,3,5-trimethylbenzene | 1,3,5-trimethylbenzene | 108-67-8 | | 1-5 |
| 2-heptanone | methyl amyl ketone | 110-43-0 | 20-30 | |
| 1,2,-ethanediamine, n,n'-bis(2-aminoethyl)- | triethylenetetramine | 112-24-3 | | .1-1.0 |
| antigorite | antigorite | 12135-86-3 | | 5-10 |
| quaternary ammonium compounds, benzyl(hydrogenated tallow alkyl)dimethyl, stearates, salts with bentonite | rheological additive | 121888-68-4 | | 1-5 |
| c.i. pigment green 7 | phthalo green pigment | 1328-53-6 | 1-5 | |
| benzene, dimethyl- | xylene | 1330-20-7 | | .1-1.0 |
| titanium oxide | titanium dioxide | 13463-67-7 | 1-5 | |
| tremolite, nonasbestiform | tremolite | 14567-73-8 | | 10-20 |
| talc | talc | 14807-96-6 | | 5-10 |
| quartz | quartz | 14808-60-7 | | .1-1.0 |
| anthophyllite, nonasbestiform | anthophyllite | 17068-78-9 | | 1-5 |
| phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)bis(oxirane) | epoxy resin | 25036-25-3 | 40-50 | |
| formaldehyde | formaldehyde | 50-00-0 | .01-.1 | |
| c.i. pigment yellow 42 | yellow iron oxide | 51274-00-1 | 1-5 | |
| butanamide, 2-((2-methoxy-4-nitrophenyl)azo) -n-(2-methoxyphenyl)-3-oxo- | pigment yellow 74 | 6358-31-2 | 1-5 | |
| solvent naphtha (petroleum), light aromatic | light aromatic solvent naphtha | 64742-95-6 | | 5-10 |
| urea, polymer with formaldehyde, butylated | urea-formaldehyde resin | 68002-19-7 | 1-5 | |
| fatty acids, c18-unsatd., dimers, reaction products with polyethylenepolyamines | polyamide resin | 68410-23-1 | | 10-20 |
| 1-butanol | n-butanol | 71-36-3 | 1-5 | 5-10 |
| sulfuric acid, barium salt | barium sulfate | 7727-43-7 | 10-20 | 20-30 |
| benzene,1,2,4-trimethyl- | pseudocumene | 95-63-6 | .1-1.0 | 5-10 |

Chemical Hazard Data

(ANSI Sections 2, 8, 11, and 15)

| Common Name | CAS. No. | ACGIH-TLV | | | | OSHA-PEL | | | | S.R. Std. | S2 | S3 | CC | H | M | N | I | O | |
|--------------------------------|-------------|------------|----------|----------|----------|------------|----------|----------|----------|-----------|----|----|----|---|---|---|---|---|---|
| | | 8-Hour TWA | STEL | C | S | 8-Hour TWA | STEL | C | S | | | | | | | | | | |
| 1,3,5-trimethylbenzene | 108-67-8 | 25 ppm | 35 ppm | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| methyl amyl ketone | 110-43-0 | 50 ppm | not est. | not est. | not est. | 100 ppm | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| triethylenetetramine | 112-24-3 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| antigorite | 12135-86-3 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| rheological additive | 121888-68-4 | 10 mg/m3 | not est. | not est. | not est. | 15 mg/m3 | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| phthalo green pigment | 1328-53-6 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| xylene | 1330-20-7 | 100 ppm | 150 ppm | not est. | not est. | 100 ppm | not est. | not est. | not est. | not est. | n | y | y | y | n | n | n | n | n |
| titanium dioxide | 13463-67-7 | 10 mg/m3 | not est. | not est. | not est. | 10 mg/m3 | not est. | not est. | not est. | not est. | n | n | n | n | n | n | y | y | n |
| tremolite | 14567-73-8 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| talc | 14807-96-6 | 2 mg/m3 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| quartz | 14808-60-7 | .025 mg/m3 | not est. | not est. | not est. | 0.1 mg/m3 | not est. | not est. | not est. | not est. | n | n | n | n | n | y | y | n | n |
| anthophyllite | 17068-78-9 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| epoxy resin | 25036-25-3 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| formaldehyde | 50-00-0 | not est. | not est. | 0.3 ppm | not est. | 0.75 ppm | 2 ppm | not est. | not est. | not est. | y | y | y | y | n | y | y | y | y |
| yellow iron oxide | 51274-00-1 | 5 mg/m3 | not est. | not est. | not est. | 10 mg/m3 | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| pigment yellow 74 | 6358-31-2 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| light aromatic solvent naphtha | 64742-95-6 | not est. | not est. | not est. | not est. | 500x ppm | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| urea-formaldehyde resin | 68002-19-7 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| polyamide resin | 68410-23-1 | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| n-butanol | 71-36-3 | 20 ppm | not est. | not est. | not est. | 100 ppm | not est. | not est. | not est. | not est. | n | y | y | n | n | n | n | n | n |
| barium sulfate | 7727-43-7 | 10 mg/m3 | not est. | not est. | not est. | 5 mg/m3 | not est. | not est. | not est. | not est. | n | n | n | n | n | n | n | n | n |
| pseudocumene | 95-63-6 | 25 ppm | not est. | not est. | not est. | not est. | not est. | not est. | not est. | not est. | n | y | n | n | n | n | n | n | n |

Footnotes:

C=Ceiling - Concentration that should not be exceeded, even instantaneously.

S=Skin - Additional exposure, over and above airborne exposure, may result from skin absorption.

n/a=not applicable
not est.=not established
CC=CERCLA Chemical

ppm=parts per million
mg/m3=milligrams per cubic meter
Sup Conf=Supplier Confidential

S2=Sara Section 302 EHS
S3=Sara Section 313 Chemical
S.R. Std.=Supplier Recommended Standard

H=Hazardous Air Pollutant, M=Marine Pollutant
P=Pollutant, S=Severe Pollutant
Carcinogenicity Listed By:
N=NTP, I=IARC, O=OSHA, y=yes, n=no