



Material Safety Data Sheet

Revision Date: 10-Jul-2012

Revision Number: 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name ALKYD DULAMEL SEMI-GLOSS
Product Code K2071B
Product Class SOLVENT THINNED PAINT
Color All

Manufacturer Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
Phone: 201-573-9600
www.benjaminmoore.com

Emergency Telephone Number(s)
CANUTEC: 613-996-6666

2. COMPOSITION INFORMATION ON COMPONENTS

Hazardous Components

Chemical Name	CAS-No	Weight % (max)
Hydrotreated heavy naphtha, petroleum	64742-48-9	30 - 60%
Titanium dioxide	13463-67-7	15 - 40%
Limestone	1317-65-3	10 - 30%
Silica, amorphous	7631-86-9	1 - 5%
Ethyl benzene	100-41-4	0.1 - 0.25%
Cobalt bis(2-ethylhexanoate)	136-52-7	0.1 - 0.25%
Silica, crystalline	14808-60-7	0.1 - 0.25%

3. HAZARDS IDENTIFICATION

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Emergency Overview

WARNING

Vapors may be irritating to eyes, nose, throat, and lungs. May cause skin irritation and/or dermatitis.
Combustible material.

Rags, steel wool or waste soaked with this product may spontaneously catch fire if improperly discarded.

Appearance liquid

Odor solvent

Potential Health Effects

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Effects

Eyes

Contact with eyes may cause irritation.

Skin

May cause skin irritation and/or dermatitis.

Inhalation

High vapor / aerosol concentrations are irritating to the eyes, nose, throat and lungs and may cause headaches, dizziness, drowsiness, unconsciousness, and other central nervous system effects.

Ingestion

Ingestion may cause irritation to mucous membranes. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

Chronic Effects

Avoid repeated exposure

Contains: Crystalline Silica which has been determined to be carcinogenic to humans by IARC (1) when in respirable form. Risk of cancer depends on duration and level of inhalation exposure to spray mist or dust from sanding the dried paint.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions None known

HMIS **Health:** 1* **Flammability:** 2 **Reactivity:** 0 **PPE:** -

HMIS Legend

0 - Minimal Hazard

1 - Slight Hazard

2 - Moderate Hazard

3 - Serious Hazard

4 - Severe Hazard

* - Chronic Hazard

X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer, has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

4. FIRST AID MEASURES

General Advice	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. Call a physician immediately
Ingestion	Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician.
Notes To Physician	Treat symptomatically
Protection Of First-Aiders	Use personal protective equipment

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Foam, dry powder or water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment And Precautions For Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific Hazards Arising From The Chemical	Combustible material. Closed containers may rupture if exposed to fire or extreme heat. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.
Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	Yes
Flash Point Data	
Flash Point (°F)	130
Flash Point (°C)	54
Flash Point Method	PMCC
Flammability Limits In Air	
Upper Explosion Limit	Not available
Lower Explosion Limit	Not available

NFPA **Health:** 1 **Flammability:** 2 **Instability:** 0 **Special:** Not Applicable

NFPA Legend

0 - Not Hazardous
 1 - Slightly
 2 - Moderate
 3 - High
 4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.

Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Remove all sources of ignition.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.
Methods For Clean-Up	Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.
Other Information	None known

7. HANDLING AND STORAGE

Handling	Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Wear personal protective equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from open flames, hot surfaces and sources of ignition.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep in properly labeled containers. DANGER - Rags, steel wool or waste soaked with this product may spontaneously catch fire if improperly discarded. Immediately after use, place rags, steel wool or waste in a sealed water-filled metal container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits**Hazardous Components**

Chemical Name	ACGIH	Alberta	British Columbia	Ontario	Quebec
Hydrotreated heavy naphtha, petroleum	N/E	N/E	N/E	N/E	N/E
Titanium dioxide	10 mg/m ³ - TWA	10 mg/m ³ - TWA	10 mg/m ³ - TWA 3 mg/m ³ - TWA	10 mg/m ³ - TWAEV	10 mg/m ³ - TWAEV
Limestone	N/E	10 mg/m ³ - TWA	10 mg/m ³ - TWA 3 mg/m ³ - TWA 20 mg/m ³ - STEL	N/E	10 mg/m ³ - TWAEV

Silica, amorphous	N/E	N/E	N/E	N/E	N/E
Ethyl benzene	100 ppm - TWA 125 ppm - STEL	100 ppm - TWA 434 mg/m ³ - TWA 125 ppm - STEL 543 mg/m ³ - STEL	100 ppm - TWA 125 ppm - STEL	100 ppm - TWAEV 435 mg/m ³ - TWAEV 125 ppm - STEV 540 mg/m ³ - STEV	100 ppm - TWAEV 434 mg/m ³ - TWAEV 125 ppm - STEV 543 mg/m ³ - STEV
Cobalt bis(2-ethylhexanoate)	N/E	N/E	N/E	N/E	N/E
Silica, crystalline	0.025 mg/m ³ - TWA	0.1 mg/m ³ - TWA	0.025 mg/m ³ - TWA	0.10 mg/m ³ - TWAEV designated substance regulation	0.1 mg/m ³ - TWAEV

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

Alberta - Alberta Occupational Exposure Limits

British Columbia - British Columbia Occupational Exposure Limits

Ontario - Ontario Occupational Exposure Limits

Quebec - Quebec Occupational Exposure Limits

N/E - Not established

Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment**Eye/Face Protection**

Safety glasses with side-shields.

Skin Protection

Long sleeved clothing. Protective gloves.

Respiratory Protection

In operations where exposure limits are exceeded, use a NIOSH approved respirator that has been selected by a technically qualified person for the specific work conditions. When spraying the product or applying in confined areas, wear a NIOSH approved respirator specified for paint spray or organic vapors.

Hygiene Measures

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling. When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	solvent
Density (lbs/gal)	10.3 - 10.4
Specific Gravity	1.23 - 1.25
pH	Not available
Viscosity (centistokes)	Not available
Evaporation Rate	Not available
Vapor Pressure	Not available
Vapor Density	Not available
Wt. % Solids	60 - 70
Vol. % Solids	40 - 50
Wt. % Volatiles	30 - 40
Vol. % Volatiles	50 - 60
VOC Regulatory Limit (g/L)	Not applicable
Boiling Point (°F)	279
Boiling Point (°C)	137
Freezing Point (°F)	Not available
Freezing Point (°C)	Not available
Flash Point (°F)	130

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point (°C)	54
Flash Point Method	PMCC
Upper Explosion Limit	Not available
Lower Explosion Limit	Not available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions. Hazardous polymerisation does not occur.
Conditions To Avoid	Keep away from open flames, hot surfaces, static electricity and sources of ignition.
Incompatible Materials	Incompatible with strong acids and bases and strong oxidizing agents.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors.
Possibility Of Hazardous Reactions	None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product

Repeated or prolonged exposure to organic solvents may lead to permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

Component

Hydrotreated heavy naphtha, petroleum

LD50 Oral: > 5,000 mg/kg (Rat) vendor data

LD50 Dermal: > 3,000 mg/kg (Rabbit)

Titanium dioxide

LD50 Oral: > 10000 mg/kg (Rat)

LD50 Dermal: > 10000 mg/m³ (Rabbit)

LC50 Inhalation (Dust): > 6.82 mg/L (Rat, 4 hr.)

Limestone

LD50 Oral: 6,450 mg/kg (Rat) vendor data

Sensitization: No sensitizing effects known.

Silica, amorphous

LD50 Oral: > 5000 mg/kg (Rat)

LD50 Dermal: 2,000 mg/kg (Rabbit)

LC50 Inhalation (Dust): > 2 mg/L

Ethyl benzene

LD50 Oral: 3500 mg/kg (Rat)

LD50 Dermal: > 5000 mg/kg (Rabbit)

LC50 Inhalation (Vapor): 55000 mg/m³ (Rat, 2 hr.)

Sensitization: No sensitizing effects known.

Silica, crystalline

LD50 Oral: 500 mg/kg (Rat) vendor data

Chronic Toxicity**Carcinogenicity**

The information below indicates whether each agency has listed any ingredient as a carcinogen:

Chemical Name	ACGIH	IARC	NTP	OSHA Carcinogen
Titanium dioxide		2B - Possible Human Carcinogen		Listed
Ethyl benzene	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	2B - Possible Human Carcinogen		Listed
Cobalt bis(2-ethylhexanoate)		2B - Possible Human Carcinogen		
Silica, crystalline	A2 - Suspected Human Carcinogen	1 - Human Carcinogen	Known Human Carcinogen	Listed

- Crystalline Silica has been determined to be carcinogenic to humans by IARC (1) when in respirable form. Risk of cancer depends on duration and level of inhalation exposure to spray mist or dust from sanding the dried paint.
- Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."
- Cobalt and cobalt compounds are listed as possible human carcinogens by IARC (2B). However, there is inadequate evidence of the carcinogenicity of cobalt and cobalt compounds in humans.

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety & Health Administration

12. ECOLOGICAL INFORMATION**Ecotoxicity Effects****Product**

12. ECOLOGICAL INFORMATION

Acute Toxicity to Fish

No information available

Acute Toxicity to Aquatic Invertebrates

No information available

Acute Toxicity to Aquatic Plants

No information available

Component

Acute Toxicity to Fish

Titanium dioxide

LC50: >1000 mg/L (Fathead Minnow - 96 hr.)

Ethyl benzene

LC50: 12.1 mg/L (Fathead Minnow - 96 hr.)

Acute Toxicity to Aquatic Invertebrates

Ethyl benzene

EC50: 1.8 mg/L (Daphnia magna - 48 hr.)

Acute Toxicity to Aquatic Plants

Ethyl benzene

EC50: 4.6 mg/L (Green algae (Scenedesmus subspicatus), 72 hrs.)

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose of in accordance with federal, state, provincial, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

Empty Container Warning

Emptied containers may retain product residue. Follow label warnings even after container is emptied. Residual vapors may explode on ignition.

14. TRANSPORT INFORMATION

TDG

Proper Shipping Name	Paint
Hazard Class	3
UN-No	UN1263
Packing Group	III

In Canada, Class 3 flammable liquids may be reclassified as non-regulated for domestic ground transportation if they meet the requirements of TDG General Exemption SOR/2008-34.

14. TRANSPORT INFORMATION

ICAO / IATA Contact the preparer for further information.

IMDG / IMO Contact the preparer for further information.

15. REGULATORY INFORMATION

International Inventories

United States TSCA Yes - All components are listed or exempt.

Canada DSL Yes - All components are listed or exempt.

National Pollutant Release Inventory (NPRI)

NPRI Parts 1- 4

This product contains the following Parts 1-4 NPRI chemicals:

<u>Chemical Name</u>	<u>CAS-No</u>	<u>Weight % (max)</u>
Ethyl benzene	100-41-4	0.1 - 0.25%
Cobalt bis(2-ethylhexanoate)	136-52-7	0.1 - 0.25%

This product may contain trace amounts of (other) NPRI Parts 1-4 reportable chemicals. Contact the preparer for further information.

NPRI Part 5

This product contains the following NPRI Part 5 Chemicals:

<u>Chemical Name</u>	<u>CAS-No</u>	<u>Weight % (max)</u>
Hydrotreated heavy naphtha, petroleum	64742-48-9	30 - 60%

This product may contain trace amounts of (other) NPRI Part 5 reportable chemicals. Contact the preparer for further information.

WHMIS Regulatory Status

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B3 Combustible liquid
B6 Reactive flammable material
D2A Very toxic materials



16. OTHER INFORMATION

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by logging onto Health Canada @ http://www.hc-sc.gc.ca/iyh-vsv/prod/paint-peinture_e.html.

Prepared By Product Stewardship Department
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Disclaimer

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K2071B

End of MSDS