

MATERIAL SAFETY DATA SHEET

Nordic Blue

 Version Number 1.0
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 Revision Date 05/14/2007
 Print Date 11/28/2011

1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION

33587 Walker Road, Avon Lake, OH 44012

Telephone : Product Stewardship (770) 271-5902

Emergency telephone : CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure

or accident).

Product name : Nordic Blue
Product code : CC10100069
Chemical Name : Mixture
CAS-No. : Mixture

Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight % |
|----------------------------|------------|----------|
| Calcium stearate | 1592-23-0 | 1 - 5 |
| Iron chromite brown spinel | 12737-27-8 | 10 - 30 |
| Titanium dioxide | 13463-67-7 | 30 - 60 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: : Inhalation, Ingestion, Skin contact

Acute exposure

Inhalation : Particulates, like other inert materials can be mechanically irritating.

Excessive inhalation of product vapors, especially during heating or

processing, may be irritating to respiratory system.

Ingestion : May be harmful if swallowed.

Eyes : Particulates, like other inert materials can be mechanically irritating.
Skin : Experience shows no unusual dermatitis hazard from routine handling.

Chronic exposure : Refer to Section 11 for Toxicological Information.



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Medical Conditions Aggravated by Exposure: : None known.

4. FIRST AID MEASURES

Inhalation : Move to fresh air in case of accidental inhalation of fumes from

overheating or combustion. When symptoms persist or in all cases of

doubt seek medical advice.

Ingestion : Do not induce vomiting without medical advice. When symptoms

persist or in all cases of doubt seek medical advice.

Eyes : Rinse immediately with plenty of water, also under the eyelids, for at

least 15 minutes. If eye irritation persists, seek medical attention.

Skin : Wash off with soap and plenty of water. If skin irritation persists seek

medical attention.

5. FIRE-FIGHTING MEASURES

Flash point : Not applicable

Flammable Limits

Upper explosion limit : Not applicable
Lower explosion limit : Not applicable
Autoignition temperature : Not applicable

Suitable extinguishing media : Carbon dioxide blanket, Water spray, Dry powder, Foam.

Special Fire Fighting

Procedures

: Fullface self-contained breathing apparatus (SCBA) used in positive

pressure mode should be worn to prevent inhalation of airborne

contaminants.

Unusual Fire/Explosion

Hazards

Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. May

emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire

conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear appropriate personal protection during cleanup, such as

impervious gloves, boots and coveralls.

Environmental precautions : Should not be released into the environment. The product should not

be allowed to enter drains, water courses or the soil.

Methods for cleaning up : Clean up promptly by sweeping or vacuum. Package all material in

plastic, cardboard or metal containers for disposal. Refer to Section 13

of this MSDS for proper disposal methods.

7. HANDLING AND STORAGE



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Handling : Take measures to prevent the build up of electrostatic charge. Heat

only in areas with appropriate exhaust ventilation.

Storage : Keep containers dry and tightly closed to avoid moisture absorption

and contamination. Keep in a dry, cool place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection : No personal respiratory protective equipment normally required.

Eye/Face Protection : Safety glasses with side-shields

Hand protection : Protective gloves

Skin and body protection : Long sleeved clothing

Additional Protective

Measures

: Safety shoes

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and at the end of workday.

Engineering measures : Heat only in areas with appropriate exhaust ventilation. Provide

appropriate exhaust ventilation at machinery.

Exposure limit(s)

| Components | Value | Exposure time | Exposure type | List: |
|----------------------------|---------------------------------------|-----------------------------------|---------------|---------|
| Calcium stearate | 10 mg/m3 | Time Weighted Average (TWA): | | ACGIH |
| Titanium dioxide | 10 mg/m3 | Time Weighted Average (TWA): | | ACGIH |
| | 15 mg/m3 | PEL: | Total dust. | OSHA Z1 |
| | 10 mg/m3 Time Weighted Average (TWA): | | as Ti | MX OEL |
| | 20 mg/m3 | Short Term Exposure Limit (STEL): | as Ti | MX OEL |
| Iron chromite brown spinel | 0.5 mg/m3 | Time Weighted Average (TWA): | as Cr | ACGIH |
| | 0.5 mg/m3 | PEL: | as Cr | OSHA Z1 |

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : Solid Evaporation rate : Not applicable Appearance : pellets Specific Gravity : Not determined : BLUE Bulk density : Not established Color Odour : Very faint Vapour pressure : Not applicable Melting point/range : Not determined Vapour density : Not applicable



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Boiling Point: : Not applicable pH : Not applicable

Water solubility : Insoluble

10. STABILITY AND REACTIVITY

Stability : Stable.

Hazardous Polymerization : Will not occur.

Conditions to avoid : Keep away from oxidizing agents and open flame. To avoid thermal

decomposition, do not overheat.

Incompatible Materials : Avoid contact with strong oxidizers. Also, avoid contact with acetal or

acetal copolymers and with amine containing materials during processing. At processing conditions, these materials are mutually destructive and involve rapid degradation. Thoroughly purge and mechanically clean processing equipment to avoid even trace quantities of these materials from coming in contact with each other.

Prevent cross contamination of feedstocks.

Hazardous decomposition

products

: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), hydrogen chloride (HCl), other hazardous materials, and

smoke are all possible. Prolonged heating (approximately 30 minutes or more) above 392 °F (200 °C) or short term heating at 482 °F (250 °C) may result in product decomposition and evolution of carbon

monoxide and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

| CAS-No. | Chemical Name | Effect | Target Organ |
|------------|----------------------------|------------------|---------------------------------|
| 12737-27-8 | Iron chromite brown spinel | Irritant | Eyes, Skin, Respiratory system. |
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. |

LC50 / LD50

This product contains the following components which, in their pure form, have the following toxicity data:

| CAS-No. | Chemical Name | Route | Value | Species |
|-----------|------------------|-----------|------------|---------|
| 1592-23-0 | Calcium stearate | Oral LD50 | > 10 gm/kg | rat |

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

| CAS No | Chamical Nama | OCILA | IADC | NTD |
|---------|---------------|-------|------|-----|
| CAS-NO. | Chemical Name | USTA | IAKC | NIP |



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| 13463-67-7 | Titanium dioxide | no | 2B | no |
|-------------|------------------|-----|-----|-----|
| 15 105 07 7 | Trainain Gioriae | 110 | -20 | 110 |

IARC Carcinogen Classifications:

- 1 The component is carcinogenic to humans.
- 2A The component is probably carcinogenic to humans.
- 2B The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

- 1 The component is known to be a human carcinogen.
- 2 The component is reasonably anticipated to be a human carcinogen.

Additional Health Hazard Information:

Iron chromite brown spinel 12737-27-8 The bi- and trivalent forms of chrome have a low order of acute toxicity, but may cause skin sensitization and irritation to the eyes. No effects have been reported for chromium (III) oxide. Chromium (III) compounds are not considered carcinogenic in animals or humans

| | 12 | 2. ECOLOGICAL INFORMATION |
|-------------------------------|----|----------------------------|
| | | |
| Persistence and degradability | : | Not readily biodegradable. |

Environmental Toxicity Chemicals are not readily available as they are bound within the

polymer matrix.

Bioaccumulation Potential : Chemicals are not readily available as they are bound within the

polymer matrix.

Additional advice No data available

13. DISPOSAL CONSIDERATIONS

Product Like most thermoplastic plastics the product can be recycled. Where

> possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.

Recycling is preferred when possible. The generator of waste material Contaminated packaging

> has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial

and local regulations.

14. TRANSPORT INFORMATION

U.S. DOT Classification : Not regulated for transportation.

ICAO/IATA (air) Refer to specific regulation.

IMO / IMDG (maritime) : Refer to specific regulation.



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15. REGULATORY INFORMATION

US Regulations:

OSHA Status : Classified as hazardous based on components.

TSCA Status : All components of this product are listed on or exempt from the TSCA

Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Not applicable

California Proposition : Not applicable

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SARA Title III Section 302 Extremely Hazardous Substance

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

SARA Title III Section 313 Toxic Chemicals:

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

| Chemical Name | CAS-No. | Weight % |
|------------------------|------------|---------------|
| CHROMIUM III COMPOUNDS | 12737-27-8 | 10.00 - 30.00 |

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

| Chemical Name | CAS-No. | Weight % | NPRI ID# |
|----------------------------|------------|---------------|----------|
| Phthalocyanine blue | 147-14-8 | 0.10 - 1.00 | 71 |
| Manganese | 7439-96-5 | 0.10 - 1.00 | 147 |
| Iron chromite brown spinel | 12737-27-8 | 10.00 - 30.00 | 69 |

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No. 12737-27-8



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DSL : All components of this product are on the Canadian Domestic

Substances List (DSL) or are exempt.

National Inventories:

Australia AICS : Listed

China IECS : Listed

Europe EINECS : Listed

Japan ENCS : Not determined

Korea KECI : Listed

Philippines PICCS : Not determined

16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.