

# MATERIAL SAFETY DATA SHEET

Olin MSDS No.: 00064.0001 Revision No.: 16 Revision Date: 1/1/10 Supercedes: 7/1/09

# 1. PRODUCT AND COMPANY IDENTIFICATION

| Product Name:    | BALL POWDER® PROPELLANT                  |
|------------------|--|
| Chemical Name:   | Mixture                                  |
| Synonyms:        | Smokeless Powder, Double Base Propellant |
| Chemical Family: | Mixture                                  |
| Formula:         | Not applicable - mixture                 |
| Product Use:     | Propellant explosive, solid              |

**COMPANY ADDRESS** 

Olin Corporation – Winchester Division, Inc. 600 Powder Mill Road East Alton, IL 62024 www.winchester.com

MSDS Control Group

TECHNICAL INFORMATION: 618-258-3507 EMERGENCY TELEPHONE NUMBER: 618-258-2111

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| CAS Number  | Components        | % By Weight | EINECS/ ELINCS # | EU Cla   | ssification      |
|-------------|-------------------|-------------|------------------|----------|------------------|
|             |                   |             |                  | Symbol   | R-Phrase         |
| 55-63-0     | Nitroglycerin     | 10 – 30     | 200-240-8        | E, T+, N | R 3-26/27/28-33- |
|             |                   | or          |                  |          | 51-53            |
|             |                   | 30 - 60     |                  |          |                  |
| 84-74-2     | Dibutyl phthalate | 1 - 5       | 201-55-74        | None     | None             |
| Proprietary | Polyester adipate | 1 - 5       | N.A.             | N.A.     | N.A.             |
| 85-98-3     | Ethyl centralite  | 3 - 7       | 291-645-2        | Xi*      | R36/37/38        |
|             | (diethyl-         |             |                  |          |                  |
|             | diphenylurea)     |             |                  |          |                  |
| 8050-09-7   | Rosin             | 1 - 5       | 232-475-7        | Xi       | R 43             |
| 141-78-6    | Ethyl acetate     | 0.5 – 1.5   | 205-500-4        | F, Xi    | R11-36-66-67     |
| 122-39-4    | Diphenylamine     | 0.5 – 1.5   | 204-539-4        | T, N     | R23/24/25-33-    |
|             |                   |             |                  |          | 50/53            |
| 86-30-6     | N-nitrosodiphenyl | 0.1 - 1     | 201-663-0        | T, Xi    | R 36/38-40       |
|             | amine             |             |                  |          |                  |
| 7757-79-1   | Potassium nitrate | 0.5 – 1.5   | 231-818-8        | O*, Xi   | R8-36/38         |
| 7778-80-5   | Potassium sulfate | 0.5 - 1.5   | 231-915-5        | None     | None             |
| 9004-70-0   | Nitrocellulose    | 40 - 70     | Not listed       | E*       | R 2              |

N.A. = not applicable; \*This material is not listed in Annex 1 of Directive 88/379/EEC. Olin has classified the material according to the conventional method based upon information from similar materials.

OSHA REGULATORY STATUS: Explosive, toxic by ingestion and inhalation, irritant, sensitizer, kidney, liver and blood toxin

# 3. HAZARDS IDENTIFICATION

# DANGER!

EXPLOSIVE. DO NOT SUBJECT TO MECHANICAL SHOCK OR IMPACT OR STATIC DISCHARGE. DO NOT USE NEAR OPEN FLAME. EXPOSURE TO DUST CAN CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. HARMFUL OR FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. EXPOSURE TO DUST CAN CAUSE RESPIRATORY SYSTEM DAMAGE. MAY CAUSE KIDNEY, LIVER AND BLOOD DAMAGE BASED ON ANIMAL DATA. CAN CAUSE AN ALLERGIC SKIN REACTION. DO NOT TAKE INTERNALLY. USE ONLY WITH ADEQUATE VENTILATION. AVOID BREATHING DUST. KEEP CONTAINER CLOSED. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.

HAZARD RATINGS (for dust or fume)

Degree of hazard (0 = low, 4 = extreme)



| Hazardous Materials Identification System (HMIS)     | Healtl | h: 2*   | Flammability: 3                                | Physical Hazard:<br>Explosive: 2                         |
|--|--------|---|--|--|
| National Fire Protection Association (NFPA)          | Mixtu  | re. Not rated.                                      |  | Unstable Reactive: 3                                     |
| HUMAN THRESHOLD RESPONSE DATA                        |        |   |  |  |
| Odor Threshold:                                      |        | Unknown   |  |  |
| Irritation Threshold:                                |        | Unknown   |  |  |
| Immediately Dangerous to Life or Health (IDLH) Value | e(s):  | The IDLH for this p is 4000 mg/m <sup>3</sup> . The | roduct is not known.<br>IDLH for nitroglycerin | The IDLH for dibutyl phthalate is 75 mg/m <sup>3</sup> . |

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#### POTENTIAL HEALTH EFFECTS

#### ACUTE EFFECTS

- Eye: Can cause irritation consisting of redness, swelling, and pain. May cause conjunctivitis with repeated exposures.
   Skin: May be harmful or fatal if absorbed through skin. Contact with dust may cause irritation consisting of redness and/or swelling.
   Inhalation: Harmful or fatal if inhaled. Inhalation of high concentrations of powder, dust, or fume may cause respiratory and nasal
- Innalation: Harmful of fatal if innaled. Innalation of high concentrations of powder, dust, or fume may cause respiratory and nasal irritation, coughing, and difficulty breathing.
- Ingestion: Harmful or fatal if swallowed. Ingestion of dust may cause nausea, vomiting, constipation, cramps, and or stomach pain. Ingestion of large doses of potassium nitrate can lead to the development of methemoglobinemia (inability of the blood to carry sufficient oxygen). It is not anticipated that exposure from this product would cause this effect.
- <u>CHRONIC</u> <u>EFFECTS:</u> Prolonged or repeated skin contact with dust may cause more severe irritation or dermatitis. Prolonged or repeated inhalation of dust or fume may cause more severe irritation and possibly lung damage. Repeated exposure may cause an allergic skin reaction consisting of itching, redness, swelling, and rash or urticaria (hives) in sensitized individuals. Nitroglycerin will produce dilation of blood vessels and drop in blood pressure which may affect the heart. It has also been shown to cause methemoglobinemia (cyanosis). Diphenylamine has been shown to induce kidney damage. Chronic exposure to high levels of ethyl acetate can cause liver damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: : Exposure to dust may aggravate an existing dermatitis, kidney, liver, blood or cardiovascular disease, asthma, emphysema, or other respiratory disease.

POTENTIAL ENVIRONMENTAL EFFECTS: May be toxic to aquatic organisms and cause long-term adverse effects in the aquatic environment.

#### 4. FIRST AID MEASURES

| EYE CONTACT:        | Immediately flush out dust particles with large amounts of water for at least 15 minutes, occasionally   |
|---------------------|--|
| SKIN CONTACT:       | In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse and thoroughly clean shoes. |
|                     | before reuse. Get medical attention.   |
| INHALATION:         | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.   |
| INGESTION:          | Poison. Get medical attention immediately. If swallowed, do NOT induce vomiting unless directed to   |
|                     | do so by medical personnel. Never give anything by mouth to an unconscious person.   |
| NOTE TO PHYSICIANS: | There is no specific antidote to the active ingredients in this product; use symptomatic treatment.  |

#### 5. FIRE FIGHTING MEASURES

| PROPERTY               | VALUE          | PROPERTY   | VALUE          |
|------------------------|----------------|--|----------------|
| Explosive              | Yes            | Flammable  | Not applicable |
| Combustible            | Not applicable | Pyrophoric   | No             |
| Flash Point (°C):      | Not applicable | Burning Rate of Material:                                  | No data        |
| Lower Explosive Limit: | Not applicable | Autoignition Temp.:  | 190 - 200°C    |
| Upper Explosive Limit: | Not applicable | Flammability Classification: (defined by 29 CFR 1910.1200) | Not applicable |

UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTINGUISHING MEDIA: Dust may cause an ignitable and/or an explosive atmosphere. For localized powder fires, smother with dry sand, dry dolomite, sodium chloride or soda ash. Use fire-extinguishing media appropriate to fight surrounding fire.



SPECIAL FIREFIGHTING PROCEDURES:

In case of fire, use normal fire fighting equipment. Response to this material requires the use of a self-contained breathing apparatus (SCBA). Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to: boots, gloves (neoprene, chlorinated polyethylene, butyl rubber), hard hat and impervious clothing, i.e., chemically impermeable suit. Wash all clothing prior to reuse.

#### 6. ACCIDENTAL RELEASE MEASURES

#### FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC AT 800-424-9300.

SPILLS OF THIS MATERIAL MAY REPRESENT AN EXPLOSION HAZARD and should be handled carefully. This product may explode if subjected to heat, shock, friction, static discharge, or impact. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. A spill of this material may require emergency response team capabilities; call 1-888-289-1911 for technical assistance.

Wet all spill materials prior to initiating clean up procedure. Use non-sparking or plastic equipment to clean up spill. Wear nonflammable or flame retardant clothing at all times. Material may best be destroyed if burned in an open flame burn if permissible by all regulatory functions. Spread material in thin layers and ignite from a remote location using a slow burning train.

Water Release: This material is heavier than water. Create an overflow dam with filtration capabilities to retain material. Divert water flow or stop if possible. Gather wet material using non-sparking or plastic utensils. Keep material damp until ready for disposal.

#### 7. HANDLING AND STORAGE

| HANDLING:  | Avoid dispersion of dust in air. Do not expose to direct light. Dot not subject to mechanical shock                             |
|--|---|
| STORAGE:   | Store in a cool, dry, well ventilated place away from all sources of ignition. Do not store at temperatures above 38°C (100°F). |
| Shelf Life Limitations:                          | Indefinite if kept under 100°F.   |
| Incompatible Materials for Packaging:            | Must be stored in original shipping container for explosion venting purposes. No incompatible packaging materials known.        |
| Incompatible Materials for Storage or Transport: | Oxidizers, acids or alkalis.  |
| OTHER PRECAUTIONS:                               | Do not shake clothing, rags or other items to remove dust. Dust should be removed by washing or HEPA vacuuming.                 |

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| CAS #       | CHEMICAL NAME                                  | ACGIH TLV                                       | OSHA PEL  | INTERNATIONAL OELS   |
|-------------|--|---|---|--|
| 9004-70-0   | Nitrocellulose                                 | None established                                | None established                                    | None established   |
| 55-63-0     | Nitroglycerin                                  | 0.05 ppm (0.46<br>mg/m <sup>3</sup> )<br>Skin   | Ceiling – 0.2 ppm<br>(2 mg/m <sup>3</sup> )<br>Skin | Denmark: 0.02 ppm (0.2 mg/m <sup>3</sup> )<br>Norway, Sweden: 0.03 ppm (0.3 mg/m <sup>3</sup> )<br>Austria, Belgium, Germany, The Netherlands,<br>Poland, Switzerland: 0.05 ppm (0.47 mg/m <sup>3</sup> ), skin<br>Finland, France: 0.1 ppm (0.9 mg/m <sup>3</sup> ), skin<br>U.K.: 0.2 ppm (2 mg/m <sup>3</sup> ), skin |
| 84-74-2     | Dibutyl phthalate                              | 5 mg/m <sup>3</sup>                             | 5 mg/m <sup>3</sup>                                 | Belgium, Denmark, France, Netherlands,<br>Switzerland, U.K.: 5 mg/m <sup>3</sup><br>Sweden: 3 mg/m <sup>3</sup>  |
| 7757-79-1   | Potassium nitrate                              | None established                                | None established                                    | None established   |
| Proprietary | Polyester adipate                              | None established                                | None established                                    | None established   |
| 85-98-3     | Ethyl centralite<br>(diethyl-<br>diphenylurea) | None established                                | None established                                    | None established   |
| 8050-09-7   | Rosin  | Sensitizer – reduce<br>to as low as<br>possible | None established                                    | None established   |
| 141-78-6    | Ethyl acetate                                  | 400 ppm (1400<br>mg/m <sup>3</sup> )            | 400 ppm (1400<br>mg/m <sup>3</sup> )                | Austria, Belgium, France, Germany, Switzerland,<br>Turkey, U.K.: 400 ppm<br>Denmark, Norway, Sweden: 150 ppm<br>Finland: 300 ppm   |
| 122-39-4    | Diphenylamine                                  | 10 mg/m <sup>3</sup>                            | 10 mg/m <sup>3</sup>                                | Austria, Belgium, Netherlands, Switzerland, U.K.:  |



|           |                         |                  |                  | 10 mg/m <sup>3</sup><br>Denmark, Norway: 5 mg/m <sup>3</sup> |
|-----------|-------------------------|------------------|------------------|--|
| 86-30-6   | N-nitrosodiphenyl amine | None established | None established | None established   |
| 7778-80-5 | Potassium sulfate       | None established | None established | None established   |

ENGINEERING CONTROLS:

EYE / FACE PROTECTION: SKIN PROTECTION:

**RESPIRATORY PROTECTION:** 

Local explosion-proof exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general explosion-proof exhaust ventilation. Use safety glasses. Wear impervious (cut-resistant) gloves and other protective clothing (aprons, coveralls)

as appropriate to prevent skin contact when using this product. If generating a dust, wash thoroughly after handling, especially before eating, drinking, or smoking. Respiratory protection not normally needed. If dusting occurs or fumes are generated above the PEL/TLV, use a NIOSH-approved respirator equipped with organic vapor cartridge and High Efficiency Particulate (HEPA) dust pre-filter. Do not eat, drink, or smoke while using this product in dust form.

GENERAL HYGIENE CONSIDERATIONS:

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

| PROPERTY                      | VALUE                    | PROPERTY                             | VALUE                 |
|-------------------------------|--------------------------|--------------------------------------|-----------------------|
| Appearance:                   | Granular solid           | Vapor Density (air = 1):             | Not applicable        |
| Odor:                         | None                     | Boiling Point (°F):                  | Not applicable        |
| Molecular Weight:             | Not applicable - Mixture | Melting point:                       | No data               |
| Physical State:               | Solid                    | Specific gravity (g/cc):             | 1.2 – 1.6             |
| pH:                           | Not applicable           | Bulk Density                         | 0.5 – 1 (g/cc)        |
| Vapor Pressure (mm Hg):       | < 1 mm Hg                | Viscosity (cps):                     | Not applicable        |
| Vapor Density                 | Not applicable           | Decomposition Temperature:           | Decomposition becomes |
|                               |                          |                                      | measurable above 50°C |
|                               |                          |                                      | (122°F)               |
| Solubility in Water (20 °C):  | Negligible               | Evaporation Rate:                    | Negligible            |
| Volatiles, Percent by volume: | < 2                      | Octanol/water partition coefficient: | Unknown               |

# 10. STABILITY AND REACTIVITY

| STABILITY:                        | CAN IGNITE DUE TO IMPACT OR STATIC DISCHARGE.                         |
|-----------------------------------|---|
| CONDITIONS TO AVOID:              | Avoid direct sunlight and open flame                                  |
| MATERIALS TO AVOID:               | Acetylene, chlorine   |
| HAZARDOUS DECOMPOSITION PRODUCTS: | Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic fumes from |
|                                   | diphenylamine composition   |
| HAZARDOUS POLYMERIZATION:         | Will not occur.   |

#### 11. TOXICOLOGICAL INFORMATION

POTENTIAL EXPOSURE ROUTES: Ingestion, inhalation, dermal exposure, and eye contact

ACUTE ANIMAL TOXICITY DATA:

| For Produc                     | : <u>t:</u>                | For Components             |                                    |                           |                             |         |                           |                       |                                     |                           |   |                     |
|--------------------------------|----------------------------|----------------------------|------------------------------------|---------------------------|-----------------------------|---------|---------------------------|-----------------------|-------------------------------------|---------------------------|---|---------------------|
|                                |                            | Nitrogly-<br>cerin         | Dibutyl<br>phthal-<br>ate          | Poly-<br>ester<br>adipate | Diethyl<br>diphenyl<br>urea | Rosin   | Ethyl<br>acetate          | Diphenyl<br>amine     | N-<br>nitroso-<br>diphenyl<br>amine | Potas-<br>sium<br>nitrate | Potas-<br>sium<br>sulfate                       | Nitrocell<br>-ulose |
| Oral LD <sub>50</sub>          | Believed<br>to be<br>toxic | 0.1105<br>g/kg<br>(rat)    | 8 g/kg<br>(rat)                    | No data                   | 2.5 g/kg<br>(rat)           | No data | 5.62<br>g/kg<br>(rat)     | 1.12<br>g/kg<br>(rat) | 1.825<br>g/kg<br>(rat)              | 3.75<br>g/kg<br>(rat)     | 6.6 g/kg<br>(rat)                               | > 5 g/kg<br>(rat)   |
| Dermal<br>LD <sub>50</sub>     | Believed<br>to be<br>toxic | > 280<br>mg/kg<br>(rabbit) | > 20<br>ml/kg<br>(rabbit)          | No data                   | No data                     | No data | > 20<br>ml/kg<br>(rabbit) | No data               | > 7.94<br>gg/kg<br>(rabbit)         | No data                   | 3 g/kg<br>(guinea<br>pig,<br>subcuta-<br>neous) | No data             |
| Inhalation<br>LC <sub>50</sub> | Believed<br>to be<br>toxic | No data                    | 4250<br>mg/m <sup>3</sup><br>(rat) | No data                   | No data                     | No data | 200<br>mg/m <sup>3</sup>  | No data               | No data                             | No data                   | No data   | No data             |



| For Produc   | <u>t:</u>  | For Components                   |         |         |                  |                         |                                     |                           |                              |                     |         |         |
|--|--|----------------------------------|---------|---------|------------------|-------------------------|-------------------------------------|---------------------------|------------------------------|---------------------|---------|---------|
| Nitrogly-<br>cerin Dibutyl Poly- Diethyl Rosin<br>ate adipate urea |  |                                  |         |         | Ethyl<br>acetate | Diphenyl<br>amine       | N-<br>nitroso-<br>diphenyl<br>amine | Potas-<br>sium<br>nitrate | Potas-<br>sium<br>sulfate    | Nitrocell<br>-ulose |         |         |
| Irritation/<br>Sensitiza<br>-tion                                  | Eye and<br>respira-<br>tory<br>irritant,<br>sensitizer | Mild eye<br>and skin<br>irritant | No data | No data | No data          | Skin<br>sensiti-<br>zer | No data                             | No data                   | Corro-<br>sive to<br>the eye | No data             | No data | No data |
|  |  |                                  |         |         |                  |                         |                                     |                           |                              |                     |         |         |

|                                       | Dipiteriylamine has been shown to induce kidney damage in laboratory animals. When         |
|---------------------------------------|--|
|                                       | fed to dogs for a period of 2 years, the rate of growth was depressed and anemia and       |
|                                       | liver damage developed.  |
|                                       | N-nitroso-diphenylamine caused an increase in bladder and kidney tumors during chronic     |
|                                       | administration to laboratory on male EDA closefice a nitraeadinbanylaming on a             |
|                                       | administration to laboratory animals. EFA classifies n-introsodiptientylamine as a         |
|                                       | probable human carcinogen, B2. TARC classifies it as a Group 3 carcinogen                  |
|                                       | (unclassifiable as to human carcinogenicity). The European Union classifies n-             |
|                                       | nitrosodiphenylamine as a Category 3 carcinogen.   |
| MUTAGENICITY:                         | This product is not known or reported to be mutagenic. N-nitrosodiphenylamine has          |
|                                       | tosted positive in a variety of in vitro and in vive mutagonicity assays                   |
|                                       | tested positive in a vallety of <i>in vitro</i> and <i>in vivo</i> indiagenicity assays.   |
| <u>REPRODUCTIVE, TERATOGENICITY</u> , | I his product is not known or reported to cause reproductive or developmental effects.     |
| OR DEVELOPMENTAL EFFECTS:             | Diphenylamine administered via the diet to pregnant rats caused teratogenic effects in the |
|                                       | offspring  |
|                                       | This product is not known or reported to cause neurological effects                        |
|                                       |  |
| INTERACTIONS WITH OTHER               |  |
| CHEMICALS WHICH ENHANCE               | None known or reported.  |
| TOXICITY:                             |  |
|                                       |  |
|                                       |  |

# 12. ECOLOGICAL INFORMATION

*ECOTOXICITY:* No data is available on this product. Individual constituents are as follows: <u>Nitrocellulose:</u> LC<sub>50</sub> > 1000 mg/l (fish, invertebrates, algae)

 Nitroglycerin:
 Bluegill, 96 hour LC<sub>50</sub> = 1.228 mg/l (static)

 MOBILITY:
 No data

 PERSISTANCE/DEGRADABILITY:
 No data

 BIOACCUMULATION:
 No data

# **13. DISPOSAL CONSIDERATIONS**

Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and non-hazardous wastes. This product may be a candidate for metal reclamation.

# 14. TRANSPORT INFORMATION

|                       | U.S. DOT       | RID/ADR | IMDG         | IATA      | IMO          | Canada TDG |
|-----------------------|----------------|---------|--------------|-----------|--------------|------------|
| PROPER SHIPPING NAME: | Powder,        | Unknown | Same as land | FORBIDDEN | Same as land | Powder,    |
|                       | Smokeless      |         |              |           |              | Smokeless  |
| HAZARD CLASS:         | 1.3 C          |         |              |           |              | 1.3 C      |
| UN NO.:               | UN0161         |         |              |           |              | UN0161     |
| PACKING GROUP:        | 11             |         |              |           |              | 11         |
| LABEL:                | EXPLOSIVE      |         |              |           |              | EXPLOSIVE  |
|                       | 1.3C           |         |              |           |              | 1.3C       |
| REPORTABLE QUANTITY:  | Not applicable |         |              |           |              |            |
|                       |                |         |              |           |              |            |



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|                  | _ |  |              |
|------------------|---|--|--------------|
| SPECIAL COMMENTS |   |  | Marine       |
|                  |   |  | pollutant;   |
|                  |   |  | forbidden by |
|                  |   |  | transport on |
|                  |   |  | passenger    |
|                  |   |  | carrying     |
|                  |   |  | roadways or  |
|                  |   |  | railways     |

#### 15. **REGULATORY INFORMATION**

US FEDERAL

| TSCA                                 | The components of this product are listed on the Toxic Substance Control Act inventory. |  |                   |                 |                          |
|--------------------------------------|---|--|-------------------|-----------------|--------------------------|
| CERCLA:                              | Ethyl acetate, R.Q.= 50   | Ethyl acetate, R.Q. = 5000 lbs.; Nitroglycerin, R.Q. = 10 lbs; Dibutyl phthalate, R.Q. = 10 lbs.; N- |                   |                 |                          |
|                                      | Nitrosodiphenyl amine,  | Nitrosodiphenyl amine, R.Q. = 100 lbs  |                   |                 |                          |
| SARA 313:                            | Nitroglycerin, Dibutyl phthalate,   |  |                   |                 |                          |
| SARA 313 Hazard Class:               | <u>Health</u> :   | Acute – Yes,   | <u>Fire</u> : Yes | Reactivity: Yes | Release of Pressure: Yes |
|                                      |   | Chronic - Yes  |                   |                 |                          |
| SARA 302 EHS List:                   | None of the components of this product are listed.                                      |  |                   |                 |                          |
| <sup>B</sup> O – Poportable Quantity | •   |  |                   |                 |                          |

RQ = Reportable Quantity

# STATE RIGHT-TO-KNOW STATUS

| Component                  | *CA Prop. 65 | New Jersey | Pennsylvania | Massachusetts | Michigan   |
|----------------------------|--------------|------------|--------------|---------------|------------|
| Nitrocellulose             | Not listed   | Х          | Х            | Х             | Not listed |
| Nitroglycerin              | Not listed   | Х          | Х            | Х             | Not listed |
| Dibutyl phthalate          | Not listed   | Х          | Х            | Х             | Х          |
| Polyester adipate          | Not listed   | Not listed | Not listed   | Not listed    | Not listed |
| Ethyl centralite (diethyl- |              |            |              |               |            |
| diphenylurea)              | Not listed   | Not listed | Not listed   | Not listed    | Not listed |
| Rosin                      | Not listed   | Not listed | Not listed   | Not listed    | Not listed |
| Ethyl acetate              | Not listed   | Not listed | Х            | Х             | Not listed |
| Diphenylamine              | Not listed   | Х          | Х            | Х             | Not listed |
| N-nitrosodiphenyl amine    | Х            | Х          | Х            | Х             | Х          |
| Potassium nitrate          | Not listed   | Not listed | Х            | Х             | Not listed |
| Potassium sulfate          | Not listed   | Not listed | Not listed   | Not listed    | Not listed |

\* "WARNING: This product contains detectable amounts of a chemical(s) known to the State of California to cause cancer and/or birth defects or other reproductive harm."

# EUROPEAN REGULATIONS Hazard Classification

| Danger \$ | Symbol:E | Explosive |
|-----------|----------|-----------|
|           |          |           |

- Very Toxic T+
- Xi Irritant
- Ν Dangerous to the environment

| Risk Phrases:   | R 3        | Extreme risk of explosion by shock, friction, fire or other sources of ignition  |
|-----------------|------------|--|
|                 | R 26/27/28 | Very toxic by inhalation, in contact with skin and if swallowed  |
|                 | R 36/37/38 | Irritating to eyes, respiratory system and skin  |
|                 | R 43       | May cause sensitization by skin contact  |
|                 | R 51/53    | Toxic to aquatic organisms; may cause long-term adverse effects in the environment   |
| Safety Phrases: | S 1        | Keep locked up   |
| -               | S 45       | In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)                    |
|                 | S 26       | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice                                 |
|                 | S 27/28    | After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water. |
|                 | S 36/37/39 | Wear suitable protective clothing, gloves and eye/face protection  |



S 29/56 Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

German WGK Classification:

CANADIAN REGULATIONS

- DSL LIST: The components of this product are on the DSL or are exempt from reporting under the New Substances Notification Regulations.
- IDL: Dibutyl phthalate, Ethyl acetate, Diphenylamine, N-nitrosodiphenyl amine

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WHMIS: This product is not subject to WHMIS. It is regulated as a Class 6 Explosive in Canada.

#### 16. OTHER INFORMATION

*REVISIONS:* New international format, toxicology review – 1/1/03; 7/1/09 - changed emergency contact number and mailing address

# PREPARED BY: Olin Corporation

<u>NOTICE</u>: THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. OLIN BELIEVES THIS INFORMATION TO BE RELIABLE AND CURRENT AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.