



# MATERIAL SAFETY DATA SHEET

Olin MSDS No.: 00093.0001  
Revision No.: 7

Revision Date: 1/1/11  
Supercedes: 1/1/10

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** NON-TOXIC SHOT SHELL PRIMED HULL / CASE  
**Chemical Name:** Mixture  
**Synonyms:** Reduced Hazard Shotshell Primed Hull / Case, Lead-Free Primed Shot Shell Hull/Case  
**Chemical Family:** Mixture  
**Formula:** Not applicable - mixture  
**Product Use/ Description:** Empty primed paper shotshell; Empty primed plastic shotshell

**COMPANY ADDRESS** MSDS Control Group  
Olin Corporation - Winchester  
Division, Inc.  
600 Powder Mill Road  
East Alton, IL 62024  
[www.winchester.com](http://www.winchester.com)

**TECHNICAL INFORMATION:**  
618-258-3507

**EMERGENCY TELEPHONE NUMBER:**  
618-258-3189

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

This product consists of the following components: A) Double Cup Head; B) Base Wad; C) Hull; and D) Primer. The Hull may be paper or plastic

CAS Number	Components	% By Weight	EINECS/ ELINCS #	EU Classification	
				Symbol	R-Phrase
7440-50-8	Copper	29 - 52	231-159-6	None	None
7440-66-6	Zinc	1 - 20	231-175-3	F (as dust or powder)	R 15-17
Mixture	Paper	12 - 40	Not applicable	None	None
64742-51-4	Wax	0.1 - 6	265-154-5	None	None
68153-28-6	Soya protein	0.1 - 2	232-720-8	None	None
9002-88-4	Polyethylene	0.1 - 46	Polymer	None	None
7439-89-6	Iron	5 - 7	231-096-4	None	None
4682-03-5	Diazodinitro phenol (Dinol, DDnNP)	0.1 - 1	225-134-9	E*, Xn*	R3-36/38-43

\*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

## 3. HAZARDS IDENTIFICATION

### CAUTION!

EXPLOSIVE. KEEP AWAY FROM HEAT. DO NOT SUBJECT TO MECHANICAL SHOCK. PARTICLES FROM FIRING MAY BE HARMFUL IF INHALED. DO NOT TAKE INTERNALLY.

HAZARD RATINGS (for dust or fume)  
Hazardous Materials Identification System (HMIS)

Degree of hazard (0 = low, 4 = extreme)  
Health: 0                      Flammability: 0

Physical Hazard:  
Explosive: 2

National Fire Protection Association (NFPA)

Mixture. Not rated.

### HUMAN THRESHOLD RESPONSE DATA

Odor Threshold:

Unknown

Irritation Threshold:

Unknown

Immediately Dangerous to Life or Health (IDLH) Value(s):

The IDLH for this product is not known. The IDLH for copper is 100 mg/m<sup>3</sup>.

**POTENTIAL HEALTH EFFECTS**

This product is composed of a capsule which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur.

When the product is fired, a small amount of particles may be generated which may be slightly irritating to the eyes and the respiratory tract. The particles may contain trace amounts of these harmful substances:

Copper: Inhalation of high concentrations of metallic copper dusts or fumes may cause nasal irritation and/or nausea, vomiting and stomach pain.

It is unlikely that the amount of particles that someone would be exposed to from firing the product would be sufficient to cause any of these effects.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** There are no medical conditions known to be aggravated by exposure to this product in its solid form.

**POTENTIAL ENVIRONMENTAL EFFECTS:** Product has not been tested for environmental properties.

**4. FIRST AID MEASURES**

- EYE CONTACT:** Immediately flush out fume or particles with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician at once.
- SKIN CONTACT:** Wash skin with plenty of soap and water.
- INHALATION:** If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention.
- INGESTION:** If ingested, immediately call a physician.

**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:	Not applicable
Lower Explosive Limit:	Not applicable	Autoignition Temp.:	No data
Upper Explosive Limit:	Not applicable	Flammability Classification: (defined by 29 CFR 1910.1200)	Explosive

- UNUSUAL FIRE AND EXPLOSION HAZARDS:** If fire reaches cargo, do not fight. Evacuate all person, including emergency responders from the area for 1500 feet (1/3 mile) in all directions.
- EXTINGUISHING MEDIA:** Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
- SPECIAL FIREFIGHTING PROCEDURES:** In case of fire, use normal fire fighting equipment. Protection concerns must also address the potential of the physical characteristic of this product as explosive.

**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. Use non-sparking equipment to clean up spill. A spill of this material will normally not require emergency response team capabilities. If, however, a large spill occurs, call 1-888-289-1911 for technical assistance.

**7. HANDLING AND STORAGE**

- HANDLING:** No special requirements
- STORAGE:** Do not store at temperatures above: 60°C (140°F)
- Shelf Life Limitations:* Indefinite at 50-90°F and 35% relative humidity.
- Incompatible Materials for Packaging:* None known
- Incompatible Materials for Storage or Transport:* Acids, Class A & B explosives, strong oxidizers, and caustics
- CONDITIONS TO AVOID:** Mechanical impact or shock and electrical discharge.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	CHEMICAL NAME	ACGIH TLV	OSHA PEL	INTERNATIONAL OELS
7439-89-6	Iron	None established	None established	None established
7440-50-8	Copper	0.2 mg/m <sup>3</sup> (fume), 1 mg/m <sup>3</sup> (dusts and mists)	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dusts and mists)	Austria, Belgium, Canada: 0.2 mg/m <sup>3</sup> (fumes), 1 mg/m <sup>3</sup> (dusts) Denmark: 1.0 mg/m <sup>3</sup> (dust and powder) Germany (MAK): 0.1 mg/m <sup>3</sup> (fume), 1 mg/m <sup>3</sup> (dusts and mists)
7440-66-6	Zinc	None established	None established	None established
4682-03-5	Diazodinitro phenol (Dinol, DDnNP)	None established	None established	None established
64742-51-4	Wax	None established	None established	None established
68153-28-6	Soya protein	None established	None established	None established
9002-88-4	Polyethylene	None established	None established	None established

ENGINEERING CONTROLS: Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation. Use hearing protection.

EYE / FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: Not normally needed

RESPIRATORY PROTECTION: Respiratory protection not normally needed.

GENERAL HYGIENE: Do not eat, drink, or smoke while using this product. Wash hands thoroughly after use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Appearance:</i>	Cylindrical plastic tube with brass head	<i>Vapor Density (air = 1):</i>	Not applicable
<i>Odor:</i>	None	<i>Boiling Point (°F):</i>	Not applicable
<i>Molecular Weight:</i>	Not applicable - Mixture	<i>Melting point:</i>	Not applicable
<i>Physical State:</i>	Solid	<i>Specific gravity (g/cc):</i>	Not applicable
<i>pH:</i>	Not applicable	<i>Bulk Density:</i>	Not applicable
<i>Vapor Pressure (mm Hg):</i>	Not applicable	<i>Viscosity (cps):</i>	Not applicable
<i>Vapor Density:</i>	Not applicable	<i>Decomposition Temperature:</i>	82°C (180°F)
<i>Solubility in Water (20 °C):</i>	Insoluble	<i>Evaporation Rate:</i>	Not applicable
<i>Volatiles, Percent by volume:</i>	Not applicable	<i>Octanol/water partition coefficient:</i>	Not applicable

## 10. STABILITY AND REACTIVITY

STABILITY: Will explode with mechanical impact or shock

MATERIALS TO AVOID: Acids, Class A & B explosives, strong oxidizers, and caustics

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides, carbon monoxide, carbon dioxide

HAZARDOUS POLYMERIZATION: Will not occur.

OTHER: Decomposition temperature is 82°C (180°F).

## 11. TOXICOLOGICAL INFORMATION

*POTENTIAL EXPOSURE ROUTES:* The physical nature of this product makes absorption from any route unlikely. A small amount of inhalable particles may be created when projectile is fired.

**ACUTE ANIMAL TOXICITY DATA:**

For Product:		For Components						
		Copper	Dinol	Poly-ethylene	Wax	Soya Protein	Iron	Zinc
Oral LD <sub>50</sub>	Not applicable for product	(mouse, intraperitoneal)	No data	>3 g/kg (rat)	No data	No data	30 g/kg (rat)	No data
Dermal LD <sub>50</sub>	Not applicable for product	375 mg/kg (rabbit, subcutaneous)	No data	No data	No data	No data	No data	No data
Inhalation LC <sub>50</sub>	Not applicable for product. Particles generated from firing may be slightly toxic.	No data	No data	No data	No data	No data	No data	No data
Irritation	Not a skin or eye irritant as a solid.	Respiratory irritant	Irritant	No data	No data	No data	Eye irritant	Eye irritant

**SUBCHRONIC/ CHRONIC TOXICITY:**

None known or reported.

**CARCINOGENICITY:**

This product is not known or reported to be carcinogenic by IARC, OSHA, NTP, or EPA

**MUTAGENICITY:**

This product is not known or reported to be mutagenic. Diazodinitrophenol tested positive in a bacterial mutagenicity test.

**REPRODUCTIVE, TERATOGENICITY, OR DEVELOPMENTAL EFFECTS:**

This product is not known or reported to cause reproductive or developmental effects.

**NEUROLOGICAL EFFECTS:**

This product is not known or reported to cause neurological effects.

**INTERACTIONS WITH OTHER CHEMICALS**

**WHICH ENHANCE TOXICITY:**

None known or reported.

**12. ECOLOGICAL INFORMATION**

**ECOTOXICITY:** No data is available on this product. Individual constituents are as follows:

**Copper:** The toxicity of copper to aquatic organisms varies significantly not only with the species, but also with the physical and chemical characteristics of the water, such as its temperature, hardness, turbidity and carbon dioxide content. Copper concentration varying from 0.1 to 1.0 mg/l have been found by various investigators to be not toxic for most fish. However, concentrations of 0.015 to 3.0 mg/l have been reported as toxic, particularly in soft water to many kinds of fish, crustacea, mollusks, insects, and plankton.

**Zinc:** The following concentrations of zinc have been reported as lethal to fish:

- Rainbow trout fingerlings: 0.13 mg/l, 12 – 24 hours
- Bluegill sunfish: 6 hr TLM = 1.9 – 3.6 mg/l (soft water, 30°C)
- Rainbow trout: 4 mg/l (hard water) 3 days
- Sticklebacks: 1 mg/l (soft water) 24 hrs

The presence of copper appears to have a synergistic effect on the toxicity of zinc towards fish.

**MOBILITY:** No data

**PERSISTANCE/DEGRADABILITY:** Not biodegradable.

**BIOACCUMULATION:** No data

**13. DISPOSAL CONSIDERATIONS**

If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D003. This waste is subject to Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly. Material may need to be deactivated before ultimate disposal.

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 nonhazardous wastes.

**14. TRANSPORT INFORMATION**

	U.S. DOT	RID/ADR	IMDG	IATA	IMO	Canada TDG
PROPER SHIPPING NAME:	Cases, Cartridge, Empty, With Primer					
HAZARD CLASS:	1.4 S					
UN NO.:	UN 0055					
PACKING GROUP:	II					
HAZARD LABEL/PLACARD:	1.4S/1.4 Placard over 1001 lbs. (454 kg)					
REPORTABLE QUANTITY:	Not applicable					
SPECIAL COMMENTS:	Not regulated for U.S. domestic transport					

**15. REGULATORY INFORMATION**
*US FEDERAL*

TSCA	The components of this product are listed on the Toxic Substance Control Act inventory.					
CERCLA:	Copper, R.Q.= 5000 lbs.; Zinc, R.Q. = 1000 lbs. (No reporting is required if diameter of the pieces of metal is equal to or exceeds 100 micrometers (0.004 inches).					
SARA 313:	Copper, Zinc (fume or dust),					
SARA 313 Hazard Class:	<u>Health:</u>	Acute – No Chronic - No	<u>Fire:</u> No	<u>Reactivity:</u> None	<u>Release of Pressure:</u> Yes	
SARA 302 EHS List:	None of the components of this product are listed.					

RQ = Reportable Quantity

*STATE RIGHT-TO-KNOW STATUS*

Component	*CA Prop. 65	New Jersey	Pennsylvania	Massachusetts	Michigan
Copper	Not listed	X	X	X	X
Zinc	Not listed	X	Not listed	X	X
Dinol	Not listed	Not listed	Not listed	Not listed	Not listed
Iron	Not listed	Not listed	Not listed	Not listed	Not listed
Wax	Not listed	Not listed	Not listed	Not listed	Not listed
Soya protein	Not listed	Not listed	Not listed	Not listed	Not listed
Polyethylene	Not listed	Not listed	Not listed	Not listed	Not listed

*EUROPEAN REGULATIONS*
Hazard Classification

Danger Symbol: E Explosive

Risk Phrases: R2 Risk of explosion by shock, friction, fire or other sources of ignition

Safety Phrases: S2 Keep out of reach of children.

German WGK Classification: Not known

*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: Copper

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

## 16. OTHER INFORMATION

*REVISIONS:* 9/21/05 – added additional information for a component; 7/1/09 – changed emergency contract number and mailing address; 1/1/11 - review

*PREPARED BY:* Olin Corporation

*OTHER:* Additional information available from: [www.winchester.com](http://www.winchester.com)

*NOTICE:* 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.