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LIGHTFIELD CORPORATION S.D.S. SHEET NO. LFLL-3005

Dear Customer,

This Safety Data Sheet (S.D.S.) has been prepared by Lightfield Corporation to assist you in recognizing, if any, the potential health and safety hazards associated with the commercial use of our product.

I. PRODUCT IDENTIFICATION

Product Name: Lightfield Less Lethal Home Defender Shotgun Loaded Round

Product Code: -

(a) 12 ga. 2 3/4" Home Defender HV Star	LHDST-12
(b) 12 ga. 2 3/4" Home Defender Rubber Slug	LHRS-12
(c) 12 ga. 2 3/4" Home Defender Double Ball	LHDB-12
(d) 20 ga. 2 3/4" Home Defender Double Ball	DBHD-20
(e) 410 ga. 2 1/2" Home Defender Rubber Buck	RBHD-410
(f) 410 ga. 2 1/2" Home Defender NOVA-DR Blank	NVHD-410
(g) 20 ga. 2 3/4" Home Defender NOVA-DR Blank	NVHD-20
(h) 12 ga. 2 3/4" Home Defender NOVA-DR Blank	NVHD-12

Use Description : Assembly of shotgun loaded round components
OSHA Hazard Classification : Explosive

II. COMPONENT DATA

PRODUCT COMPOSITION

The products consists of the following components:

12 ga. 2 3/4" Home Defender HV Star **LHDST-12**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	45-75%	Rubber Star (1)	LHDST-12-66300
(2) Plastic Hull (Clear)	12-25%	Plastic Hull	LHDST-12-66301
(3) Plastic Wad (Powder)	5-12%	Plastic Wad (Powder)	LHDST-12-66302
(4) Disc Plastic (Load)	3-5%	Disc Plastic (Load)	LHDST-12-66303
(5) Propellant	5-12%	Smokeless Powder	LHDST-12-66304
(6) Primer	3-7%	Shotshell Primer	LHDST-12-66305

12 ga. 2 3/4" Home Defender Rubber Slug**LHDRS-12**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	45-75%	Rubber Slug (Black)	LHDRS-12-67300
(2) Plastic Hull (Clear)	14-27%	Plastic Hull	LHDRS-12-67301
(3) Plastic Wad (Powder)	5-12%	Plastic Wad (Powder)	LHDRS-12-67302
(4) Cardboard Wad (Spacer)	4-10%	Cardboard Wad (Spacer)	LHDRS-12-67303
(5) Propellant	5-11%	Smokeless Powder	LHDRS-12-67304
(6) Primer	3-7%	Shotshell Primer	LHDRS-12-67305

12 ga. 2 3/4" Home Defender Double Ball**LHDDDB-12**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	45-75%	Rubber Balls (2)	LHDDDB-12-68300
(2) Plastic Hull (Clear)	12-25%	Plastic Hull (Clear)	LHDDDB-12-68301
(3) Plastic Wad (Powder)	5-12%	Plastic Wad (Powder)	LHDDDB-12-68302
(4) Disc Cardboard (Load)	3-5%	Disc Cardboard (Load)	LHDDDB-12-68303
(5) Propellant	4-11%	Smokeless Powder	LHDDDB-12-68304
(6) Primer	3-7%	Shotshell Primer	LHDDDB-12-68305

20 ga. 2 3/4" Home Defender Double Ball**DBHD-20**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	45-75%	Rubber Balls (2)	LHDDDB-20-69300
(2) Plastic Hull (Clear)	12-25%	Plastic Hull (Clear)	LHDDDB-20-69301
(3) Plastic Wad (Powder)	5-12%	Plastic Wad (Powder)	LHDDDB-20-69302
(4) Disc Cardboard (Load)	3-5%	Disc Cardboard (Load)	LHDDDB-20-69303
(5) Propellant	4-11%	Smokeless Powder	LHDDDB-20-69304
(6) Primer	3-7%	Shotshell Primer	LHDDDB-20-69305

410 ga. 2 1/2" Home Defender Triple Ball**RBHD-410**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	45-75%	Rubber Balls (3)	LHDTB-410-79300
(2) Plastic Hull (Clear)	12-25%	Plastic Hull (Clear)	LHDTB-410-79301
(3) Plastic Wad (Powder)	5-12%	Plastic Wad (Powder)	LHDTB-410-79302
(4) Disc Cardboard (Load)	3-5%	Disc Cardboard (Load)	LHDTB-410-79303
(5) Propellant	4-11%	Smokeless Powder	LHDTB-410-79304
(6) Primer	3-7%	Shotshell Primer	LHDTB-410-79305

410 ga. 2 1/2" Home Defender NOVA-DR Blank**NVHD-410**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	40-50%	Walnut Shell	
(2) Plastic Hull	12-25%	Plastic Hull	
(3) Plastic Wad (Powder)	3-8%	Plastic Wad (Powder)	
(4) Disc Plastic (Load)	4-9%	Disc Cardboard	
(5) Propellant	6-12%	Smokeless Powder	
(6) Primer	3-7%	Shotshell Primer	

20 ga. 2 3/4" Home Defender NOVA-DR Blank**NVHD-20**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	40-50%	Walnut Shell	
(2) Plastic Hull	12-25%	Plastic Hull	
(3) Plastic Wad (Powder)	3-8%	Plastic Wad (Powder)	
(4) Disc Plastic (Load)	4-9%	Disc Cardboard	
(5) Propellant	6-12%	Smokeless Powder	
(6) Primer	3-7%	Shotshell Primer	

12 ga. 2 3/4" Home Defender NOVA-DR Blank**NVHD-12**

<u>COMPONENT</u>	<u>PERCENT</u>	<u>PRODUCT</u>	<u>CODE NUMBER</u>
(1) Load	40-50%	Walnut Shell	LFNB-12-59300
(2) Plastic Hull	12-25%	Plastic Hull	LFNB-12-59301
(3) Plastic Wad (Powder)	3-8%	Plastic Wad (Powder)	LFNB-12-59302
(4) Disc Cardboard (Load)	4-9%	Disc Cardboard (Load)	LFNB-12-59303
(5) Propellant	6-12%	Smokeless Powder	LFNB-12-59304
(6) Primer	3-7%	Shotshell Primer	LFNB-12-59305

LOAD**Component:- Rubber Slug (b)**

Material: PVC Compound, Black or Blue Cylindrical Shape, No odor

Hazardous: Yes, as fume or dust

Component:- Rubber Ball (c) (d) (e)

Material: PVC Compound, Black Spherical, No odor

Hazardous: Yes, as fume or dust

Component:- Rubber Star (a)

Material: PVC Compound, Various Colors, Spherical Star Shape, No odor

Hazardous: Yes, as fume or dust

PLASTIC SHOTSHELL CASE**Plastic Tube (a) (b) (c) (d) (e)**

Chemical Name: Polyethylene
Hazardous: No

Steel

Hazardous: No

Brass

Hazardous: Yes, as fume or dust.

PLASTIC WAD (POWDER)

Plastic Wad (a) (b) (c) (d) (e)

Chemical Name: Polyethylene

Hazardous: No

DISC PLASTIC (LOAD)

Disc Plastic (a)

Chemical Name: Polyethylene

Hazardous: No

DISC CARDBOARD (LOAD)

Disc Cardboard (c) (d) (e)

Chemical Name: Cardboard

Hazardous: No

CARDBOARD WAD (SPACER)

Cardboard Wad (b)

Chemical Name: Cardboard

Hazardous: No

PROPELLANT

Smokeless Powder (a) (b) (c) (d) (e)

Chemical Composition:

Nitrocellulose 89%

Nitroglycerine 9.7%

Diphenylamine 0.4%

Centralite I 0.9%

Added:

Surface coating agent 1.5%

Graphite 0.1%

Hazardous: Yes

PRIMER

Primer (a) (b) (c) (d) (e)

Chemical Name: Steel
Hazardous: No

Chemical Name: Copper
Hazardous: Yes, as fume or dust

Chemical Name: Zinc
Hazardous: Yes, as fume or dust

Chemical Name: Lead Styphnate
Hazardous: Yes, as fume or dust

Chemical Name: Barium Nitrate
Hazardous: Yes

SAFE HANDLING AND STORAGE PRECAUTIONS

- (a) Store in a dry, cool, and well-ventilated area away from all sources of ignition.
- (b) Do not subject to mechanical shock.
- (c) Do not take internally.
- (d) Avoid contact with skin, eyes, and clothing. Upon contact with skin or eyes wash off with water.
- (e) Shelf life limitations, 20-25 years.
- (f) Incompatible materials for storage or transport: Strong oxidizers, Class A & B explosives.

PHYSICAL DATA

- (a) Appearance: Plastic cylinder
Color: Clear (a) (b) (c) (d)

PERSONNEL PROTECTIVE EQUIPMENT REQUIREMENTS

- (a) If product is used indoors or in poorly ventilated areas use explosion proof local exhaust ventilation.
- (b) Always use safety glasses when using this product.

FIRE AND EXPLOSIVE HAZARD INFORMATION

Explosive: Yes

Extinguishing Media: Water spray

Try to prevent fire from reaching ammunition, flood with water. If no water is available use sand or foam.

Fire Fighting:

Use water to cool containers exposed to fire.

Evacuate all personal, including emergency services, for 150 feet (46 meters) in all directions. Ammunition fires are noisy, but can be safely and effectively extinguished by firefighters using

standard fog nozzles. The fragments are low velocity and the standard fire fighting equipment, including face shields will provide protection.

STABILITY INFORMATION

- a) Mechanical shock or impact: could detonate, based on primer.
- b) Electrical (static) discharge: could detonate, based on primer.
- c) Cartridge may detonate if case is punctured or severely damaged, based on primer.
- d) Incompatible materials: Strong Acids and Caustics.
- e) Hazardous decomposition products: Nitrogen Oxides, Carbon Monoxide, Carbon Dioxide, Lead oxides, led dust or fumes.

TRANSPORTATION INFORMATION (a) (b) (c) (d) (e)

This material is regulated as **DOT** Hazardous Material.

DOT description from the Hazardous Materials Table 49 CFR 172.101:1 and (U.S.): Cartridges, Small Arms, 1.45, UN0012, PG II

Water (IMO): Same as land.

Air (IATA/ICAO): Same as land.

Hazard Label/Placard: Non* / 1.4S Via Air.

Reportable Quantity: Not applicable (Par 49 CFR 172.101, Appendix).

Emergency Guide: No. 50

FIRST AID MEASURES

EYES:

Remove person to fresh air. If wearing contact lenses remove lenses immediately. If affected by particles hold eyelids apart and flush eyes thoroughly with water for 15 to 20 minutes, occasionally lifting the upper and lower eyelids. If irritation develops obtain medical attention immediately.

SKIN:

Wash affected skin thoroughly with soap and water.

INHALATION:

If symptoms of lung irritation occur remove victim to fresh air immediately. If breathing has stopped, perform artificial respiration and get medical attention immediately. Keep affected person warm and at rest.

INGESTION:

If ingested, call physician immediately.