



Double Base Powders
SAFETY DATA SHEET
January 2017

The following smokeless powders
are distributed by
IMR Legendary Powders

IMR Blue®
IMR Green®
IMR Red®
IMR UnEqual®

Material Safety Data Sheet

General Dynamics Ordnance and Tactical
Systems–Canada Valleyfield Inc.
55, rue Masson
Valleyfield (Québec)
Canada J6S 4V9

Emergency phone number
24 hours : 1-888-922-3330
Emergency Response Plan ERP2-1693

SECTION I - PRODUCT IDENTIFICATION

Product name : HS, SS, RF (all types) – Double base, propellant powder

WHIMS classification :

Division : not controlled
Subdivision : not controlled

GD Part number : 515-519-520-521-522-523-525-528-529-530-531-532-533-534-541-542-598-621-641-771.770

Chemical formula : N/AP

Product use : Gun propellant

CAS number : N/AP

MSDS number : 16K006

SECTION II - PHYSICAL / CHEMICAL DATA

Physical state and appearance : Black granular solid.

Molecular weight : N/AP

Vapour density (air = 1) : N/AV

Boiling point (°C) : N/AP

Odour : N/AV

Vapour pressure : N/AV

Evaporation : N/AP

Freezing point (°C) : N/AV

pH : N/AV

Coefficient of water / oil distribution : N/AV

Density : 1.6 g/cm³

Solubility in water (20°C) : N/AP

SECTION III - COMPOSITION

<u>Ingredients</u>	<u>% wt</u>	<u>TWA</u>	<u>CAS number</u>
Nitrocellulose	50 – 90	None	9004-70-0
Nitroglycerine	5 – 40	2 mg/m ³	55-63-0
Potassium sulphate	0.5	N/AV	7778-80-5
Graphite	0.4	10 mg/m ³	7782-42-5
Ethyl Centralite	1 – 2		85-98-3

SECTION IV - FIRE AND EXPLOSION INFORMATION

Flash point (°C) :	N/AP
Autoignition temperature (°C) :	170°C
Upper flammable limit (volume %) :	N/AV
Lower flammable limit (volume %) :	N/AV
Flammability ? :	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
If yes, under what conditions ? :	Heat, open flame, static discharge and impact.
Means of extinction :	Water can be used from a distance.
Special procedures :	Evacuate immediately. Do not fight fire.
Hazardous combustion products :	Carbon oxides (CO, CO ₂) and Nitrogen (NO _x).
Explosion data :	This product is explosive and will ignite at high temperature, with an open flame or with a spark.
Sensitivity to mechanical impact or to static discharge :	Sensitive to static discharge and impact.

SECTION V - REACTIVITY DATA

Chemical stability :	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
If no, under what conditions ? :	Heat, open flame and sparks.
Incompatibility to other substances ? :	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
If so, which ones ? :	Strong alkalis, strong acids and ignition sources.
Reactivity and under what conditions :	N/AP
Hazardous decomposition products :	Nitrogen oxides (NO _x).

SECTION VI - HEALTH HAZARD DATA

Route of entry :

Skin absorption	<input checked="" type="checkbox"/>
Inhalation	<input checked="" type="checkbox"/>
Ingestion	<input checked="" type="checkbox"/>
Skin contact	<input checked="" type="checkbox"/>
Eye contact	<input type="checkbox"/>

Exposure limits (TWA) :

Irritancy (product) : Is irritating to the eyes and to the respiratory tract.

Sensitization to product : N/AV

Carcinogenicity : N/AV

Teratogenicity : N/AV

Reproductive effects : N/AV

Synergistic materials : N/AV

Mutagenicity : N/AV

Effects of acute exposure to product : Irritation of the eyes and the upper respiratory tract (nose and throat), followed by coughing.

Effects of chronic exposure to product : N/AV

Toxicological data :

Products	Species	DL50 oral	DL50 skin	CL50 inhalation
Nitroglycérine	Rat	80 mg/kg	N/AV	N/AV

SECTION VII - PREVENTIVE MEASURE

PERSONAL PROTECTIVE EQUIPMENT

Gloves and clothing :	Cotton or nitril gloves and protective clothing. Change frequently.
Eye protection :	Safety glasses with lateral protection.
Footwear :	Anti-static conductive shoes.
Other :	Safety shower and safety eye shower could be available.
Respiratory protection :	If ventilation is insufficient, wear a dust mask or a cartridge respirator.
Engineering controls :	N/AV
Handling procedures and equipment :	Explosive, will ignite if exposed to sudden heat.
Storage requirements :	Store away from source of ignition and heat.

Special shipping information :

Hazard Class :	1.3C
UN number :	UN 0161
Shipping name :	Powder, smokeless
EX number :	1990030229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244, 1994070209-210, 1997070055, 1990060050-051, 1990080090
Subsidiary risk :	Ø
Packing group :	II

Special shipping information: (Equivalency certificate)

Hazard Class :	4.1
UN number :	UN 3178
Shipping name :	Flammable solid inorganic NOS (small arms propellant)
EX number :	1990030229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244, 1994070209-210, 1997070055, 1990060050-051, 1990080090
Subsidiary risk :	Ø
Packing group :	II

SECTION VIII - FIRST AID MEASURES

Skin :	Wash contaminated area with soap and water.
Eye :	Keeping eyes open, rinse immediately with running water for at least 15 minutes.
Inhalation :	Move victim to fresh air. If victim is not breathing give CPR. Give oxygen, keep victim warm and get medical help.
Ingestion :	Consult a physician.
Other and advice to doctor :	N/AV

SECTION IX - ENVIRONMENTAL PROTECTION INFORMATION

Environmental effects :	N/AV
Deactivating chemicals :	N/AV
Steps to be taken in the event of a spill or a leak :	Be sure to wet powder thoroughly before picking up with conventional methods.
Waste disposal :	Incinerate at an approved site.

SECTION X - PREPARATION INFORMATION

Prepared by :	General Dynamics Ordnance and Tactical Systems–Canada Valleyfield Inc.
Telephone number :	450-371-5520
Fax number :	450-377-7873
Date :	September, 2016

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Legend :

N/AP :	Non applicable
N/AV :	Not available
CAS :	Chemical Abstract Service
TWA :	Time Wait Average
WHIMS :	Workplace Hazardous Materials Information System