



Double Base Powders

SAFETY DATA SHEET

June 2017

The following smokeless powders are distributed by Hodgdon Powder Company.

Hi-Skor 700X TM **(EX-2016090001)**

Hi-Skor 800X TM **(EX-2016090001)**

Clays (AS-30N) **(EX-2013031259)**

International (AS-50N) **(EX-2015110878)**

Universal (AP-70N) **(EX-2012010792)**

1.4C EX Approval Number in Bold Parenthesis

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

MU-WALA SHOTGUN POWDER ASSON

PROPER SHIPPING NAME

POWDER. SMOKELESS

PRODUCT USE

Poroczi double base smokeless powders or propellant for shotgun ammunition.

SUPPLIER

Company: Thales, Australia, Muiwala
Address:
Private bag 1
Mulwala
NSW, 2647
AUS

Company: Thales, Australia, Muiwala Ltd
Address:
Bayiy Street
Mulwala
NSW, 2647
AUS
Telephone: +61 2 5742 2200
Emergency Tel: +61 2 5742 2200
Fax +61 2 5744 1873

Section 2 . HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code_

POISONS SCHEDULE

None

RISK	Risk Phrases
Rsk Codes	» Explosive when dry.
R01	» Extreme risk of explosion by shock fire friction or other sources of ignition.
R03	» Very toxic by inhalation in contact with skin and if swallowed.
R26 ¹ 27/28	» Danger of cumulative effects.
R33	» Harmful to aquatic organisms may cause long- term adverse effects in the aquatic environment.
R52/53	
SAFFTY	Safety Phrases
Safety Codes	x Keep locked up.
501	» Wear suitable protective clothing
538	» In case of insufficient ventilation wear suitable respiratory equipment.
838	a Use only in well ventilated areas.
S51	a To clean the floor and all objects contaminated by this material use water and detergent.
5401	a This material and its container must be disposed of in a safe way.
S35	» Keep away from food drink and animal feeding stuffs.
S13	» In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).
S45	This material and 1.5 container must be disposed of as hazardous waste.
S60	

Section 3 - COMPOSITION I INFORMATION ON INGREDIENTS

NAME	CAS PN	
nitrocellulose	0004-70-0	>85
nitroglycerin	55-63-0	10
additives nonhazardous		<10

continued...

Section 4 - FIRST AID MEASURES

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do NOT induce vomiting,
- if vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

- If this product comes in contact with the eyes:
 - Immediately hold eyelids apart and flush the eye continuously with running water,
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

SKIN

- » If skin contact occurs:
 - Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area
- Lay patient down, Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures,
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary,

NOTES TO PHYSICIAN

a Symptoms of vasodilation and reflex tachycardia may present following organic nitrate overdose; most organic nitrates are extensively metabolised by hydrolysis to inorganic nitrites. Organic nitrates and nitrites are readily absorbed through the skin, lungs, mucosa and gastro-intestinal tract. Delayed pulmonary oedema may result following exposure to nitrous oxides formed on thermal decomposition of the propellant.

Section 6 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- a DANGER: Deliver media remotely.
 - For minor fires: Flooding quantities only.
 - For large fires: Do not attempt to extinguish.

FIRE FIGHTING

- a WARNING. EXPLOSIVE MATERIALS / ARTICLES PRESENT!
 - Evacuate all personnel and move upwind.
 - Prevent re-entry.
 - Alert Fire Brigade and tell them location and nature of hazard
 - May be explosively reactive, detonate and release much heat.

FIRE/EXPLOSION HAZARD

- WARNING: HIGH EXPLOSION HAZARD!
 - Combustible.
 - Will burn with rapidly increasing intensity of fire.
 - Dry material is extremely sensitive to shock, friction, heat and sparks.
 - Avoid metal to metal contact.

FIRE INCOMPATIBILITY

- Avoid contact with other explosives, pyrotechnics, solvents, adhesives, paints, cleaners and unauthorized metals, plastics, packing equipment and materials
- Avoid contamination with acids, alkalis, reducing agents, amines and phosphorus.

HAZCHEM: None

Personal Protective Equipment
Gaf.t tight chemical resistant suit.
Limit exposure duration to 1 BA set 30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

» Clean up at spills immediately.
Avoid contact with skin and eyes.
wear impervious gloves and safety glasses.
Use spark-free tools when handling.
Remove an ignition sources.
Place spilled material in clean, dry, sealable, labelled container.
Flush spill ems with water.

MAJOR SPILLS

a Clear area of personnel.
Restrict access to area.
Alert Fire Brigade and tell them location and nature of hazard-
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent any means available, spillage from entering drains and water course.
- Consider evacuation (or protect in place).
No smoking or naked lights within area.
Shut off all possible sources of ignition and increase ventilation.
Stop leak if safe to do so.
Collect. using a spark-free shovel. and seal in labelled drums for disposal.
Wash spill area with large quantities of wafer.
Protective clothing and equipment should be washed down after use and laundered separately from non-c..intarninated materials_
In the case of transport accident notify the State Police. State
Explosives inspector and the Manufacturer, Thales Mulwala Faci:ity.
Collect recoverable packages and segregate from loose, spilled material

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 HANDLING AND STORAGE

PROCEDURE FOR HANDLING

s Use good occupational work practice. Observe manufacturer's storing and handling recommendations.
Avoid all personal contact, including inhalation.
Wear protective clothing when risk of exposure occurs.
Avoid smoking, naked lights, neat or ignition sources.
Must not be struck by metal implements.
Avoid shock and friction.
Avoid thermal shock.
Use in a well-ventilated area.
Avoid contact with incortmatible materials.
When handling, DO NOT eat, drink or smoke.
Avoid physical dun/age le with:6(Tel
Always wash hands with soap and water after handling. Work clothes should be laundered separately.

SUITABLE CONTAINER

a Pxplasive Code Packing Instruction P114(b) or 114(b)
General packaging provisions of 4.1.1, 4.1.3 and special provision 4.1.5 are to be met. For UN 0160, 0161 - If outer packaging is drum then inner packaging is not required. For UN 0160, 0161 - If outer packaging is 1A2 or 132 metal drums then drum construction shall he that risk of explosion. by reason of increase by internal pressure horn internal or external causes, is prevented.
For UN 0077, 0132, 0234, 0235, 0236. packagings are lo be lead free, otherwise;
Inner Packagings:
Bags: Paper Kraft, Plastics. Textiles - sift proof, Woven Plastic - sift proof
Receptacles: Fibreboard, Metal, Paper. Plastic, Woven Plastic - sift proof
Intermediate Packagings:
Not necessary
Outer Packagings:
Boxes. Natural Wood (4C1), Natural Wood -sift proof (4C2), Plywood len), Reconstituted Wood (41-), Fibreboard (40)
Drums: Sleet, Removable Read (1A2), Aluminium, removable head (132), Plywood (1D), Fibre (10), Plastic, removable head (1 H2)
Check containers are clearly labelled.
Packaging as recoionirvieci by manufacturer.

STORAGE INCOMPATIBILITY

Segregate from strong acids strong alkalis and strong oxidisers,
Avoid contact with other explosives, pyrotechnics, solvents, adhesives, paints, cleaners and unauthorized metals, plastics, packing equipment and materials.
- Avoid contamination with acids, alkalis, reducing agents, amines and phosphorus.

STORAGE REQUIREMENTS » Store in original

containers. No smoking, naked lights, heat or ignition sources.
Keep dry.
Keep storage area free of debris, waste and combustibles.
Protect containers against physical damage.
. Chock regularly for :pills and leaks.
Store cases in a well ventilated magazine licensed for NCO Class 1.3C
Explosives.

NOTE: If deterioration of the explosive occurs or large quantities of explosive need to be destroyed notify the Manager, Tholes Mulwala Facility or State Explosives Department.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

So. roe	Material	TWA ppm	TWA mg/m ³
Australia Leposure Standards	nitrocellulose (Inspirable (not otherwise classified))		
Australia Exposure Standards	nitroglycerin (Nitroglycerin (NG))	0.05	0.46

PERSONAL PROTECTION

RESPIRATOR

Type A-s Filter or sufficient capacity

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. If contact lenses are removed at the first sign of eye redness or irritation, lenses should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NOSH Current Intelligence Bulletin 591.

HANDS/FEET

a Wear protective gloves, eg. PVC.
Protective footwear.

OTHER

a Overalls,
- Eyewash unit.
- Impervious apron.
Ensure there is ready access to a safety shower.
- Barrier cream.
Manufacture may require:
Non-static clean room clothing

ENGINEERING CONTROLS

Use in a well-ventilated area.
General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Small grey, green-grey or orange-grey disc shaped granules. Insoluble in water.

WARNING. SEVERE EXPLOSION HAZARD. Detonation may occur from heavy impact or excessive heating. Avoid all contact with other chemicals.

PHYSICAL PROPERTIES

Solid.
Does not mix with water.
Floats on water.

Molecular Weight; Not applicable,
Melting Range (°C): at 170 decomposes
Solubility in water (g/L): Immiscible
pH (1% solution): Not applicable.
Volatile Component (% vol) Negligible
Relative Vapour Density (air=1) Not applicable
Lower Explosive Limit (%): Not applicable
Autoignition Temp (°C): 170
State: Divided solid

Boiling Range (°C): Not available.
Specific Gravity (water=1) Approx. 0.6
pH (as supplied): Not applicable
Vapour Pressure (kPa): Negligible
Evaporation Rate: Not applicable
Flash Point: Not applicable
Upper Explosive Limit (%): Not applicable.
Decomposition Temp (°C): Explosive.
Viscosity: Not Applicable

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Product is considered stable under normal handling conditions.
- - Stable under normal storage conditions. - Hazardous polymerization will not occur. *For incompatible materials - refer to Section 7- Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

Very toxic by inhalation, in contact with skin and if swallowed.

CHRONIC HEALTH EFFECTS

» Lfanger of cumulative effects,

TOXICITY AND IRRITATION

- Not available. Refer to individual constituents.

NITROCELLULOSE:

a No significant acute toxicological data identified in literature search.

NrrROGLYCERIN:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Thu material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nor :allergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis.

Substacbe has been investigated as a tumorigen, mutagen and reproductive effector.

Equivocal tumorigen by RTFCS criteria.

Reproductive enactor in rats.

SKIN

nitroglycerin

Australia Exposure
Standards - Skin

Notes

Sk

Section 12 - ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This material and Its container must be disposed of as hazardous waste.

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible. Special hazards may exist - specialist advice may be required.
- Consult manufacturer for recycling options.
- Consult State Land Waste Management AuthoCty for disposal.
approved site.

Explosives which are surplus, deteriorated or considered unsafe for transport, storage or use shat• be destroyed and the statutory authorities shall he notified. Explosives must not be thrown away, buried, discarded or placed with garbage. This material may be disposed of by burning but the operation mist be performed under the control of a person competent in the destruction of explosives.

Section 14 - TRANSPORTATION INFORMATION



I. abets Required: EXPLOSIVE
HAZCHEM: None (ADG7)

Land Transport UNDG: Class or division; UN No.:	1.3C 0161	Subsidiary risk: UN packing group:	None None
Shipping Name: POWDER, 3MOKELESST			
Air Transport MIA: ICAO/IATA Class: UN/ID Number; Special provisions: Cargo Only	.3Q 0161 None	ICAO/IATA Subrisk: Packing Group:	None None
Packing Instructions: Passenger and Cargo	Forbidden	Maximum Qty/Pack: Passenger and Cargo	Forbidden
Packing Instructions: Passenger and Cargo Limited Quantity Packing Instructions:	Forbidden	Maximum Qty/Pack: Passenger and Cargo Limited Quantity Maximum Qty/Pack:	Forbidden
Shipping Name: POWDER, SMOKELESS t			
Warm & Transport INIDG: M D G C I a s s :	1.3C	IMOG Subrisk:	None
UN Number: EMS Number: Limited Quantities:	0161 F-8, S-Y flwe	Packing Group: Special provisions:	None None
Shipping Name: POWDER, SMOKFLESS			

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS

Regulations for ingred cots

Mu'male Shotgun Powder Atii6ON (GAS: None):

No regulallons applicable

nitrocellulose (CAS_ 90Cz1-70-0) is found co the following regulatory lists;

- Australia Dangerous Goods Code (ADC Code) - Goods Too Dangerous To Be Transported
- Australia Exposure Standards
- Australia High Volume Industrial Chemtoal List (FIVICI)
- Australia inventory of Chemical Substances (AICS)
- OECD Representative List of High Production Volume (HPV) Chemitals

nitroglycol in (CAS, 55-61-0) is found on the following regulatory lists;

Australia - Victoca Occupational Health and Safety Regulations - Schedle 2: materials at Maio• Hazard Facilites fAnd Their Threshold Quantity)

Table 2

- Australia Dangerous Goods Code (ADG Code) -Goods Tco Dangerous To Be Transioned
- Australia Explosives Code (AE Code)
- Australia Exposure Standards
- Australia Hazardous Substar.-.es
- Australia Inventory of Chemical Substances (AICS)
- Aust.' o lia .1 5L<Irid cl for t•it_ U i jonri Sttt..tduf ns., or Drugs end Fki,sot (SUSDP) .Appendix C
- Australia Standard for the Uniform Schodui ng of Drugs and Persons (SUSDP) .Schedule 2
- Australia Standard for the Uniform Schedu i rig of Drugs and Poisons (SUSDP) .Schedule 3
- Australia Standard for the Uniform Schedu. ng of Drugs and Poisons (SUSDP) - Schedule 4
- Internatonal At Transport Association (IATA) Dangerous Goods Regulations
- Intematrenal Al Transport Association /IATA) Dangerous Goods 14t4gJtatorts - ProhirlIW List
- OECD Representative List of High Production Volurre (HPV) Grntals

Section 16 - OTHER INFORMATION

), Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.netireferences.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment, *Many* factors determine whether the reported Hazards are Risks in the workplace or other settings.

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This is the end of the MISDS.