

Safety Matches

PROFORCE EQUIPMENT, INC.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Identification

Product form : Mixture
Product name : Safety Matches
Product code : 21010,21050,21060,21065,21080,21220 (BRANDED NDuR)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Matches for use in outdoor conditions.

1.3. Details of the supplier of the safety data sheet

Proforce Equipment, Inc.
3230 Executive Way
Miramar, FL 33025
T 305-436-7984

1.4. Emergency telephone number

Emergency number : Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 CCN725304 or +1 703-527-3887 (collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Ox. Sol. 1 H271 - May cause fire or explosion; strong oxidiser

Acute Tox. 3 (Oral) H301 - Toxic if swallowed

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS03

GHS06

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H271 - May cause fire or explosion; strong oxidizer
H301 - Toxic if swallowed

Precautionary statements (GHS-US) :

P210 - Keep away from open flames. - No smoking
P220 - Keep/Store away from clothing, combustible materials
P221 - Take any precaution to avoid mixing with combustible materials
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear eye protection
P283 - Wear fire/flame resistant/retardant clothing
P301+P310 - If swallowed: Immediately call a POISON CENTER
P306+P360 - If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P321 - Specific treatment (see Carefully comply with the instructions for use on this label)
P330 - Rinse mouth
P370+P378 - In case of fire: Use sand, foam, extinguishing powder, carbon dioxide (CO₂) to extinguish
P371+P380+P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
P405 - Store locked up
P501 - Dispose of contents/container to an authorized waste collection point
P102 - Keep out of reach of children

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Potassium chlorate	(CAS No) 3811-04-9	30 - 40	Ox. Sol. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Aquatic Chronic 2, H411
Phosphorus elemental	(CAS No) 7723-14-0	3 - 5	Acute Tox. 1 (Oral), H300 Acute Tox. 2 (Dermal), H310 Acute Tox. 4 (Inhalation:dust,mist), H332
Potassium dichromate	(CAS No) 7778-50-9	< 0.1	Ox. Sol. 2, H272 Acute Tox. 2 (Oral), H300 Acute Tox. 4 (Dermal), H312 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1B, H314 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : IF ON CLOTHING: Remove contaminated clothing. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a poison center or doctor/physician. Specific treatment (see Guidance - Health on this label).

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : Irritating to respiratory system.
- Symptoms/injuries after skin contact : Slight irritation.
- Symptoms/injuries after eye contact : Mild eye irritation.
- Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : May cause fire or explosion; strong oxidizer.
- Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials. Notify authorities if product enters sewers or public waters.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Take any precaution to avoid mixing with combustible materials. Do not handle until all safety precautions have been read and understood. Do not breathe smoke.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : open flames. Keep container closed when not in use. Keep in fireproof place. Keep out of reach of children. Store in a dry place.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. Combustible materials.

Maximum storage period : Physically and chemically stable for at least 4 years when stored in the original unopened sales container at ambient temperatures.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Wear fire/flame resistant/retardant clothing.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Matches, safety.

Color : Brown

Odor : characteristic

Odor threshold : No data available

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pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: Does not flash
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: May intensify fire; oxidizer. May cause fire or explosion; strong oxidizer.
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Solubility	: Water: Solubility in water of component(s) of the mixture : • Potassium dichromate: 115 - 130 g/l (at 20 °C) • Phosphorus elemental: 4.1 mg/l (at 25 °C)
Log Pow	: No data available
Auto-ignition temperature	: > 100 °C
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

May cause fire or explosion; strong oxidizer.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Overheating. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Not classified. Inhalation:dust,mist: Not classified.

Safety Matches	
ATE US (oral)	59.825 mg/kg body weight
Potassium chlorate (3811-04-9)	
LD50 oral rat	1870 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (oral)	1870.000 mg/kg body weight
ATE US (dust, mist)	1.500 mg/l/4h
Potassium dichromate (7778-50-9)	
LD50 oral rat	48 mg/kg
LD50 dermal rabbit	1150 mg/kg

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Potassium dichromate (7778-50-9)	
ATE US (oral)	48.000 mg/kg body weight
ATE US (dermal)	1150.000 mg/kg body weight
ATE US (dust, mist)	0.050 mg/l/4h

Phosphorus elemental (7723-14-0)	
LD50 oral rat	3030 µg/kg
LD50 dermal rat	100 mg/kg
LC50 inhalation rat (mg/l)	4.3 mg/l (Exposure time: 1 h)
ATE US (oral)	3.030 mg/kg body weight
ATE US (dermal)	100.000 mg/kg body weight
ATE US (vapors)	4.300 mg/l/4h
ATE US (dust, mist)	4.300 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Potassium dichromate (7778-50-9)	
IARC group	1 - Carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Specific target organ toxicity (repeated exposure)	: Not classified
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Aspiration hazard	: Not classified
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Potential Adverse human health effects and symptoms	: Toxic if swallowed.
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Symptoms/injuries after inhalation	: Irritating to respiratory system.
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Symptoms/injuries after skin contact	: Slight irritation.
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Symptoms/injuries after eye contact	: Mild eye irritation.
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Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life.
Ecology - water	: Un-burned composition is non-selectively toxic to plants.

Potassium chlorate (3811-04-9)	
LC50 fish 1	13500 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 fish 2	1750 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

Potassium dichromate (7778-50-9)	
LC50 fish 1	> 139 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static])
LC50 fish 2	113.6 - 155.7 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])

Phosphorus elemental (7723-14-0)	
LC50 fish 1	0.0017 - 0.0035 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	0.001 - 0.004 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	0.025 - 0.037 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

12.2. Persistence and degradability

Safety Matches	
Persistence and degradability	The product is not biodegradable.

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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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Phosphorus elemental (7723-14-0)

BCF fish 1	< 200
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Hazardous waste due to potential risk of explosion.

Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1944 Matches, safety (book, card or strike on box), 4.1, III

UN-No.(DOT) : UN1944

Proper Shipping Name (DOT) : Matches, safety
(book, card or strike on box)

Transport hazard class(es) (DOT) : 4.1 - Class 4.1 - Flammable Solid 49 CFR 173.124

Hazard labels (DOT) : 4.1 - Flammable solid



Packing group (DOT) : III - Minor Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 186

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Packaging Exceptions (49 CFR 173.xxx) : 186

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

TDG

No additional information available

Transport by sea

UN-No. (IMDG) : 1944

Proper Shipping Name (IMDG) : MATCHES, SAFETY

Class (IMDG) : 4.1 - Flammable solids, self-reactive substance and solid desensitized explosives

Packing group (IMDG) : III - substances presenting low danger

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Air transport

UN-No. (IATA)	: 1944
Proper Shipping Name (IATA)	: Matches, safety
Class (IATA)	: 4.1 - Flammable solids
Packing group (IATA)	: III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Potassium chlorate (3811-04-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium dichromate (7778-50-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
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Phosphorus elemental (7723-14-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the United States SARA Section 302

Subject to reporting requirements of United States SARA Section 313

SARA Section 302 Threshold Planning Quantity (TPQ)	100 (This material is a reactive solid. The TPQ does not default to 10000 pounds for non-powder, non-molten, non-solution form)
SARA Section 313 - Emission Reporting	1.0 % (yellow or white)

15.2. International regulations

CANADA

Potassium chlorate (3811-04-9)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class C - Oxidizing Material
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Potassium dichromate (7778-50-9)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class C - Oxidizing Material Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Phosphorus elemental (7723-14-0)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class B Division 4 - Flammable Solid Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
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EU-Regulations

No additional information available

National regulations

Potassium chlorate (3811-04-9)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Poisonous and Deleterious Substances Control Law
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

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Potassium dichromate (7778-50-9)

Listed on IARC (International Agency for Research on Cancer)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Poisonous and Deleterious Substances Control Law
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)

Phosphorus elemental (7723-14-0)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

15.3. US State regulations

Potassium chlorate (3811-04-9)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Potassium dichromate (7778-50-9)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Phosphorus elemental (7723-14-0)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information : None.

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Full text of H-phrases:

Acute Tox. 1 (Oral)	Acute toxicity (oral) Category 1
Acute Tox. 2 (Dermal)	Acute toxicity (dermal) Category 2
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Carc. 1A	Carcinogenicity Category 1A
Muta. 1B	Germ cell mutagenicity Category 1B
Ox. Sol. 1	Oxidizing solids Category 1
Ox. Sol. 2	Oxidizing solids Category 2
Resp. Sens. 1	Respiratory sensitisation Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H271	May cause fire or explosion; strong oxidizer
H272	May intensify fire; oxidizer
H300	Fatal if swallowed
H301	Toxic if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H340	May cause genetic defects
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product