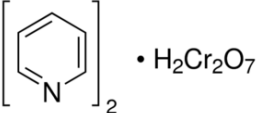


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form	: Substance
EC no	: 243-478-8
CAS No	: 20039-37-6
Product code	: 05489
Chemical structure	: 
Synonyms	: PDC

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable solids,	H228
Category 1	
Oxidising Solids,	H272
Category 2	
Skin corrosion/irritation,	H314
Category 1	
Carcinogenicity	H350i
(inhalation) Category 1B	
Hazardous to the aquatic	H410
environment — Chronic	
Hazard, Category 1	

Full text of classification categories and H statements : see section 16

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Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.1; R49

F; R11

O; R8

C; R34

N; R50/53

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS02



GHS05



GHS08



GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H228 - Flammable solid
H272 - May intensify fire; oxidiser
H314 - Causes severe skin burns and eye damage
H350i - May cause cancer by inhalation
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P273 - Avoid release to the environment

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%
PYRIDINIUM DICHROMATE Extra Pure	(CAS No) 20039-37-6 (EC no) 243-478-8	100

Full text of R- and H-phrases: see section 16

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3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. If you feel unwell, seek medical advice.

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

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation	: May cause cancer by inhalation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: May intensify fire; oxidiser. Flammable solid.
Explosion hazard	: Heating may cause a fire or explosion.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Stop release.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Clear up rapidly by scoop or vacuum.
-------------------------	--

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Do not get in eyes, on skin, or on clothing.
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Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture. Store in a well-ventilated place. Keep away from ignition sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : protective gloves
Eye protection : Chemical goggles or safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Molecular mass : 376.2 g/mol
Colour : Orange yellow crystalline.
Odour : No data available
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : 152 - 153 °C
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Vapour pressure at 50 °C : 0.0000001 hPa at 25 °C

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Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.713 g/cm³
Solubility	: Water: 943 g/l at 20 °C - OECD Test Guideline 105 - clear
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 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

Self-heating: may catch fire. Flammable solid.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame. Heat. Sparks. Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Serious eye damage, category 1, implicit
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer by inhalation.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

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Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 3085
UN-No. (IMDG)	: 3085
UN-No.(IATA)	: 3085
UN-No.(ADN)	: 3085
UN-No. (RID)	: 3085

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: OXIDIZING SOLID, CORROSIVE, N.O.S.
Proper Shipping Name (IMDG)	: OXIDIZING SOLID, CORROSIVE, N.O.S.
Proper Shipping Name (IATA)	: OXIDIZING SOLID, CORROSIVE, N.O.S.
Proper Shipping Name (ADN)	: OXIDIZING SOLID, CORROSIVE, N.O.S.

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Proper Shipping Name (RID)	: OXIDIZING SOLID, CORROSIVE, N.O.S.
Transport document description (ADR)	: UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S., 5.1 (8), II, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S., 5.1 (8), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S., 5.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S., 5.1 (8), II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S., 5.1 (8), II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 5.1 (8)
Danger labels (ADR)	: 5.1, 8



IMDG

Transport hazard class(es) (IMDG)	: 5.1 (8)
Danger labels (IMDG)	: 5.1, 8



IATA

Transport hazard class(es) (IATA)	: 5.1 (8)
Hazard labels (IATA)	: 5.1, 8



ADN

Transport hazard class(es) (ADN)	: 5.1 (8)
Danger labels (ADN)	: 5.1, 8



RID

Transport hazard class(es) (RID)	: 5.1 (8)
Danger labels (RID)	: 5.1, 8

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14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: OC2
Special provision (ADR)	: 274
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC06
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAN
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24
Hazard identification number (Kemler No.)	: 58
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 1W

- Transport by sea

Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC06
IBC special provisions (IMDG)	: B2
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33

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EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-Q
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: H1
Segregation (IMDG)	: SG38, SG49, SG60

- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y544
PCA limited quantity max net quantity (IATA)	: 2.5kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
Special provision (IATA)	: A3
ERG code (IATA)	: 5C

- Inland waterway transport

Classification code (ADN)	: OC2
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

- Rail transport

Classification code (RID)	: OC2
Special provision (RID)	: 274
Limited quantities (RID)	: 1kg
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P002, IBC06
Mixed packing provisions (RID)	: MP2
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage – Loading and unloading (RID)	: CW24
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 58

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

PYRIDINIUM DICHROMATE Extra Pure is not on the REACH Candidate List

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PYRIDINIUM DICHROMATE Extra Pure is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 1B	Carcinogenicity (inhalation) Category 1B
Flam. Sol. 1	Flammable solids, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
Skin Corr. 1	Skin corrosion/irritation, Category 1
H228	Flammable solid
H272	May intensify fire; oxidiser
H314	Causes severe skin burns and eye damage
H350i	May cause cancer by inhalation
H410	Very toxic to aquatic life with long lasting effects
R11	Highly flammable
R34	Causes burns
R49	May cause cancer by inhalation
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R8	Contact with combustible material may cause fire
C	Corrosive
F	Highly flammable
N	Dangerous for the environment
O	Oxidising

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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