

Supplier

Pacon Corporation
2525 N. Casaloma Drive
Appleton, WI
1-800-333-2545

Material Safety Data Sheet

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

Section 1 - Chemical Product and Company Identification

Chemical Formula	CaSO4.1/2H2O
CAS#	26499-65-0.
CI#	Not available.
Synonym	Plaster of Paris, Sulfuric acid, calcium salt (1:1) hemihydrate
Chemical Name	Calcium Sulfate Hemihydrate
Contact Information	Pacon Corporation 2525 N. Casaloma Drive Appleton, WI 1-800-333-2545
For emergencies call	1-800-222-1222

Section 2 - Composition and Information on Ingredients

Name	CAS #	% by Weight
Calcium sulfate hemihydrate	26499-65-0.	90-100%

Toxicological Data on Ingredients: Not applicable.

Section 3 - Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant),
of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to upper respiratory tract.

Repeated or prolonged exposure to the substance can produce target organs damage.

Health Hazard: Minimal Hazard
Fire Hazard: Minimal Hazard
Reactivity: Minimal Hazard
Physical Hazard: Slight Hazard

Section 4 - First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used.

WARM water MUST be used. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient.

Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration.

If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel.

Never give anything by mouth to an unconscious person. Loosen tight

If large quantities of this material are swallowed, call a physician immediately.

clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5 - Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Slightly explosive in presence of open flames and sparks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:

Calcium sulfate mixed with phosphorous will ignite at high temperatures.

When primed at a high temperature with potassium nitrate-calcium silicide mixture,

calcium sulfate mixed with excess phosphorus will burn.

Special Remarks on Explosion Hazards:

A violent or explosive reaction can occur upon heating when calcium sulfate is mixed with aluminum powder. Explosion can result from an exothermic reaction when calcium sulfate is mixed with diazomethane vapor.

Section 6 - Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate product is not through the sanitary system. Be careful that the present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7 - Handling and Storage

Precautions: Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8 - Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 15 (mg/m³) from OSHA (PEL) [United States] Inhalation Total.

TWA: 5 (mg/m³) [Canada] Inhalation Respirable.

TWA: 10 (mg/m³) from NIOSH [United States] Inhalation Total.

TWA: 5 (mg/m³) from NIOSH [United States] Inhalation Respirable.

TWA: 5 (mg/m³) from OSHA (PEL) [United States] Inhalation Respirable.

TWA: 5 (mg/m³) [United Kingdom (UK)] Inhalation Respirable.

TWA: 10 (mg/m³) [United Kingdom (UK)] Inhalation Total.

TWA: 10 (mg/m³) from ACGIH (TLV) [United States] Inhalation Total.

TWA: 10 STEL: 20 (mg/m³) [Canada] Inhalation Total.³Consult local authorities for acceptable exposure limits.

Section 9 - Physical and Chemical Properties

Physical state and appearance: Solid. (Powdered solid.)

Odor: Odorless.

Taste: Tasteless.

Molecular Weight: 145.15 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: 1450 degree

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: Not available.
Vapor Pressure: Not applicable.
Vapor Density: Not available.
Volatility: Not available.
Odor Threshold: Not available.
Water/Oil Dist. Coeff.: Not available.
Ionicity (in Water): Not available.
Dispersion Properties: Not available.
Solubility:
Very slightly soluble in cold water.
Slightly soluble in hot water.
Soluble in acids, ammonium salts, glycerin.

Section 10 - Stability and Reactivity Data

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Incompatible materials, moisture.
Incompatibility with various substances: Reactive with oxidizing agents, acids.
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Reactivity:
When mixed with water, it sets to a hard mass.
Incompatible with aluminum and diazomethane.
Loses 1/2 water at 163 C. Hygroscopic; keep container tightly closed.
Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur.

Section 11 - Toxicological Information

Routes of Entry: Inhalation. Ingestion.
Toxicity to Animals:
LD50: Not available.
LC50: Not available.
Chronic Effects on Humans: May cause damage to the following organs:
upper respiratory tract.
Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant),
of ingestion, of inhalation.
Special Remarks on Toxicity to Animals: Not available.
Special Remarks on Chronic Effects on Humans: Not available.
Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: May cause skin irritation.
Eyes: Causes eye irritation.
Inhalation: Causes respiratory tract and mucous membrane irritation. Symptoms may
include coughing, rhinitis, epistaxis, sneezing, pneumonia, labored breathing.
Ingestion: Because it hardens quickly after absorbing moisture, its ingestion may result in
obstruction. Chronic Potential Health Effects:

Inhalation: Repeated or prolonged inhalation may cause chronic rhinitis, laryngitis, pharyngitis, impaired sense of smell and taste, bleeding from the nose, and reactions of cause tracheal and bronchial membranes. It may also unspecified effects on the lungs.

Section 12 - Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13 - Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14 - Transport Information

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15 - Other Information

Protective Equipment:

Gloves. Lab coat. Safety glasses.

Dust respirator. Be sure to use an approved/certified respirator or equivalent.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make own investigations to determine the suitability of the information for their particular purposes.

Safety Data Sheet
according to 1907/2006/EC, Article 31 (REACH)

Printing date 25.11.2010

Revision: 24.11.2010

**1 Identification of the substance/preparation and of the company/
undertaking**

- **Product details**
- **Trade name:** **Panax Blue BS-7000**
- **Application of the substance / the preparation** *Printing inks*
- **Manufacturer/Supplier:**
*UK SEUNG Chemical Co. Ltd.
155-8, Haidong-Dong, Keumjeong-Ku
Busan / South-Korea
Tel.: +82 51 523 1515
Fax: +82 51 529 6326
E-Mail: ukseung@chol.com*
- **Further information obtainable from:**
*Product safety department
Mr. Jung Yoo Sang
Tel.: +82 51 718 5360
Fax: +82 51 529 6326
E-Mail: ukseung@chol.com*
- **Information in case of emergency:**
*Tel.: +82 51 718 5360 / +82 51 523 1515, Extension 5360
E-Mail: ukseung@chol.com*

2 Hazards identification

- **Hazard description:** *Not applicable.*
- **Information concerning particular hazards for human and environment:**
Not applicable.
- **GHS label elements** *Void*

3 Composition/information on ingredients

- **CAS No. Description**
147-14-8 Phthalocyanine Blue
- **Identification number(s)**
- **EINECS Number:** *205-685-1*

4 First aid measures

- **General information:** *No special measures required.*
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:**
*Immediately wash with water and soap and rinse thoroughly.
Generally the product does not irritate the skin.*
- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **After swallowing:**
*Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.*

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **Protective equipment:** *Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Person-related safety precautions:** *Avoid formation of dust.*
- **Measures for environmental protection:**
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Dispose of the material collected according to regulations.
- **Additional information:** *No dangerous substances are released.*

7 Handling and storage

- **Handling:**
- **Information for safe handling:** *No special measures required.*
- **Information about fire - and explosion protection:**
Dust can combine with air to form an explosive mixture.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store only in unopened original receptacles.
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **Storage class:** *13 (VCI)*

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
Not required.
- **Additional information:** *The lists valid during the making were used as basis.*
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** *Safety glasses*

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9 Physical and chemical properties

• General Information

Form:	<i>Powder</i>
Colour:	<i>Blue</i>
Odour:	<i>Odourless</i>

• Change in condition

Melting point/Melting range:	<i>Undetermined.</i>
Boiling point/Boiling range:	<i>Undetermined.</i>

• **Flash point:** *Not applicable.*

• **Flammability (solid, gaseous):** *Product is not flammable.*

• **Density at 20°C:** *1.6 g/cm³*

• **Solubility in / Miscibility with water:** *Insoluble.*

Solids content: *100.0 %*

10 Stability and reactivity

• Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

• Materials to be avoided:

• **Dangerous reactions** *No dangerous reactions known.*

• **Dangerous decomposition products:** *No dangerous decomposition products known.*

11 Toxicological information

• Acute toxicity:

• LD/LC50 values relevant for classification:

147-14-8 Phthalocyanine Blue

Oral | LD50 | 6400 mg/kg (rat)

• **on the skin:** *No irritant effect.*

• **on the eye:** *No irritating effect.*

• **Sensitization:** *No sensitizing effects known.*

• Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

12 Ecological information

• Additional ecological information:

• General notes:

*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.*

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13 Disposal considerations

• Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

• Uncleaned packaging:**• Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

14 Transport information

• Land transport ADR/RID (cross-border)

• ADR/RID class: -

• Maritime transport IMDG:

• IMDG Class: -

• Marine pollutant: No

• Air transport ICAO-TI and IATA-DGR:

• ICAO/IATA Class: -

• UN "Model Regulation": -

15 Regulatory information

• Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The substance is not subject to classification according to EU lists and other sources of literature known to us.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• Department issuing MSDS: Product safety department

• Contact:

Mr. Jung Yoo Sang

Tel.: +82 51 718 5360 / +82 51 523 1515 Extension 5360

Fax: +82 51 529 6326

e-mail: ukseungt@chol.com

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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Trade name: Panax Blue BS-7000

EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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Carbon Black

According to the Globally Harmonized Version 4.0 / REG_KR
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1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Chemical name : Carbon Black
Product name : CORAX®
Use of the chemical : Tires, rubber reinforcing filler
Restrictions on use : No data

Manufacturer and Supplier : Orion Engineered Carbons Co. Ltd.
Bupyeong Factory: 94 Galsan 1-dong, Bupyeong-gu, Incheon, 403-081, Korea
Yeosu Factory: 350, Wolnai-Dong, Yeosu-si, Jeollanam-do, 555-260, Korea
Telephone No. : +82-61-690-5232
Fax No. : +82-61-690-5285
Emergency Telephone No. : +82-61-690-5220

2. HAZARDS IDENTIFICATION

Hazard Classification

Based on our test results and the data that we have, we have concluded that this product does not fall under any hazard classification under Industrial Safety and Health Law (GHS classification).

Label elements including precautionary statements

Pictogram : Not applicable
Signal word : Not applicable
Hazard statement : Not applicable
Precautionary statement : Not applicable

Other hazards not included under the GHS classification standards if any : not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name/Other Name	CAS No. or Identification No.	Contents (%)
Carbon Black, amorphous	-	1333-86-4 (EC No. 215-609-9)	≥99%

4. FIRST-AID MEASURES

If the substance is inhaled

In case product dust is released:
Possible discomfort: cough, sneezing
If necessary: Provide with fresh air.

If the substance contacts skin

Wash off with plenty of water and soap.

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If the substance contacts eyes

Possible discomfort is due to foreign substance effect. Rinse thoroughly with plenty of water keeping eyelid open. In case of persistent discomfort: Consult an ophthalmologist.

If the substance is ingested

Have the mouth rinsed with water. After absorbing large amounts of substance / In case of discomfort: Supply with medical care.

Notes to physician

After absorbing large amounts of substance:
Administration of activated charcoal
Acceleration of gastrointestinal passage

5. EXPLOSION AND FIRE-FIGHTING MEASURES

Suitable extinguishing media

All extinguishing substances are suitable.

Inappropriate extinguishing media (Extinguishing media which must not be used for safety reasons)

High volume water jet

Specific hazards arising from the chemical substance

Hazardous substances generated when the substance or mixture is combusted

Carbon monoxide, carbon dioxide, organic products of decomposition, sulphoxides and nitric oxides are formed if heated above the decomposition temperature.

Protective equipments for fire fighting and preventive measures

Special protective equipment for fire-fighting

In the event of fire, wear self-contained breathing apparatus.

Further information

Water used to extinguish fire should not enter drainage systems, soil or stretches of water.

Ensure there are sufficient retaining facilities for water used to extinguish fire.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with the relevant regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions and protective equipment

Wear personal protective equipment.

Environment precautions

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Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

Methods for cleaning up

Use mechanical handling equipment.
Collect in suitable containers.

Additional advice

Avoid dust formation.

7. HANDLING AND STORAGE

Safe handling precaution

Use local ventilation.

Advice on protection against fire and explosion

In closed containers such as silos or poorly ventilated store rooms, carbon monoxide may be present. For this reason, sources of ignition should be kept clear and respiratory equipment independent of surrounding air should be worn as a precautionary measure. When repairs of the production system are to be made (e.g. welding work), the section to be repaired must be essentially free of product.

Conditions for safe storage

Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate engineering control

If dust occurs: Local ventilation. See also section 7.

Exposure limits, biological limit values etc.

OSHA PEL-TWA 3.5mg/m³

ACGIH TLV-TWA 3.5mg/m³

NIOSH REL-TWA 3.5mg/m³

Korea: Industrial Safety and Health Law (KOSHA)

TWA 3.5 mg/m³

Japan: Ministry of Labor (Notification 79, Version 2001.4.27)

TWA 2.9 mg/m³

Japan: Industrial Hygiene Association

TWA 4 mg/m³, (1 mg/m³, dust of inhalation)

China: Inventory of Existing Chemical Substances

TWA 4.0 (Version 2002)

TWA STEL 8.0 (15min)

Personal protective equipment

Respiratory protection

If the limits at the workplace are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

Dust mask with P2 particle filter

Hand protection

Wear protective gloves made of the following materials: natural latex (NR), PVC, nitrile rubber (NBR).

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The material thickness and rupture time data do not apply to non-solute solids / dusts.

Eye protection

Safety glasses with side-shields
If dust occurs: basket-shaped glasses

Skin and body protection

No particular measures required.

Hygiene measures

When using, do not eat, drink or smoke.
Wash face and/or hands before break and end of work.
To ensure ideal skin protection: use super fatted soaps and skin cream for skin care.

Protective measures

Handle in accordance with good industrial hygiene and safety practices.
If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Form	pearled
Colour	black
Odour	odourless
pH	> 7 (50g/l) (20°C)
Melting point/range	> 3000 °C
Boiling point/range	> 3000 °C
Flash point	not applicable
Flammability (solid)	> 45 s (method: VDI 2263)
Ignition temperature	> 300 °C (method: DIN 51 794)
Autoinflammability	> 140 °C (method: IMDG-Code) * Remark: volume-dependent parameter, measured temperature refers to the 1 l sample
Auto-ignition temperature	50°C (27 m ³ , method: VDI Guideline 2263) ¹⁾
Lower explosion limit	dust 50 g/m ³ (method: VDI 2263)
Upper explosion limit	not determined
Maximum absolute explosive pressure	10 bar (method: VDI 2263)
Vapour pressure	not applicable
Density	(1,7 - 1,9 g/cm ³) (20 °C)
Bulk density	(300 - 450kg/m ³)
Water solubility	insoluble
Viscosity	not applicable
Evaporation rate	no data
Vapour density	no data
Partition coefficient (n-octanol/water)	not applicable

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Decomposition temperature (Thermal decomposition)	> 250 °C
Molecular weight	no data

10. STABILITY AND REACTIVITY

Chemical stability and Possibility of hazardous reactions

Carbon black cannot easily be caused to explode and therefore there is no danger in practical use. However, in special test procedures a carbon black/air mixture can explode.

Conditions to avoid Avoid temperatures above 250°C

Incompatible materials no data

Hazardous decomposition products

If thermally decomposed above the decomposition temperature, carbon monoxide, carbon dioxide (CO₂), organic products of decomposition, sulphoxides and nitric oxides are formed.

11. TOXICOLOGICAL INFORMATION

Information on the routes of exposure and health hazards

Acute toxicity

Acute oral toxicity	LD50 Rat: > 8000 mg/kg
Acute dermal toxicity	no data
Acute inhalation toxicity	no data

Irritation

Skin irritation	Rabbit not irritating
Eye irritation	Rabbit not irritating

Respiratory sensitization no data

Skin sensitization No evidence of sensitization was found in animals (Method: Buehler). No cases of sensitization in humans have been reported.

Carcinogenicity

Oral Rat: 2 years, Feeding experiments, no tumours
Oral Mouse: 2 years, Feeding experiments, no tumours
Dermal Mouse: 12~18 months, target organ/effect: skin / no tumours
Inhalation Mouse / Hamster: 12~24 months, target organ/effect: lung, no tumours
Inhalation Rat: 2 years, target organ/ effect: target organ/effect: lung, tumours

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Carcinogenicity assessment

tumour development in Rats caused by lung overload, no epidemiological evidence for lung tumors in Humans

Additional information relating to hazard to human

The scientific discussion about the carcinogenic effect of inorganic low solubility particles (fine dusts) - such as carbon black - has not been concluded. In the view of many inhalation toxicologists tumour development resulted in experiments on rats through a type specific mechanism in overloading of the rat lung (overload phenomena).²⁾

Compatible findings have not yet occurred in the exposition of human beings The IARC however, evaluated this rat study in the monograph 65 as being a sufficient indicator of the carcinogenic properties of carbon black in tests on animals. According to the IARC there are not sufficient indicators of the carcinogenic effect of carbon black on human beings. An overall evaluation of carbon black resulted from the IARC schematic evaluation as: "possibly carcinogenic for human beings" (Group 2B).

Applying the rules of the Globally Harmonized System of Classification and Labeling (GHS, e.g. UN "Purple Book", EU CLP Regulation) these results do not lead to classification of carbon black as a carcinogen. UN GHS says, that even if adverse effects are seen in animal studies or in-vitro tests, no classification is needed if the mechanism or mode of action is not relevant to humans.³⁾ The European CLP Regulation also mentions, that no classification is indicated if the mechanism is not relevant to humans.⁴⁾ Furthermore the CLP guidance on classification and labeling states, that "lung overload" in animals is listed under mechanisms not relevant to humans.⁵⁾

The PAH (polycyclic aromatic hydro-carbons) contents of the Degussa carbon blacks are below 0.1 %.

Human experience

Several epidemiological and clinical studies of workers in the carbon black production industries show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

No increased cancer risk was observed in workers exposed to carbon black.

Germ cell mutagenicity

Carbon black is not suitable to be tested in bacterial (Ames test) and other in vitro systems because of its insolubility. When tested, however, results for carbon black showed no mutagenic effects. Organic solvent extracts of carbon black can, however,

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contain traces of polycyclic aromatic hydrocarbons (PAHs). A study to examine the bioavailability of these PAHs showed that PAHs are very tightly bound to carbon black and not bioavailable⁶⁾

In an experimental investigation, mutational changes in the hprt gene were reported in alveolar epithelial cells in the rat following inhalation exposure to carbon black. This observation is believed to be rat specific and a consequence of "lung overload."

Reproductive toxicity

No effects have been reported in long-term animal studies

Specific target organ toxicity (single exposure)

Not applicable

Specific target organ toxicity (repeated exposure)

Inhalative Rat
Testing period: 90 days
NOAEL (Respirable dust): 0.0011mg/l (= 1.1 mg/m³)
Target organ/effect: lungs / inflammation, hyperplasia, fibrosis

Inhalative Rat, Mouse
Testing period: 2 years
Target organ/effect: lungs / inflammation, fibrosis, tumours

These tests are the result of exposure under overload conditions, and the effect on rats is specific to species

The abovementioned argumentation under the item of "additional information relating to hazard to human" is also relevant to prove the non-classification of carbon black concerning "specific target organs systemic toxicity" (STOT, repeated exposure), Group 1 (lung)

Aspiration toxicity

no data

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LD50 (Brachydanio rerio): > 1000mg/l / 96h method: OECD 203
Toxicity to daphnia	EC50 Daphnia magna: > 5600mg/l / 24h method: OECD 202
Toxicity to algae	NOEC scenedesmus subspicatus: 10000mg/l / 3day method: OECD 201
Toxicity to bacteria	ECo Activated sludge: ≥ 800mg/l / 3h method: DEV L3 (TTC test)

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Persistence and degradability

Biodegradability The product is a solid, insoluble in water, chemically inert and virtually not biologically degradable.

Bioaccumulation no data

Mobility in soil no data

Effects of other hazards no data

13. DISPOSAL CONSIDERATIONS

Disposal methods

Dispose of contents/containers in accordance with regulations prescribed under the Wastes Management Law.

Precautions for disposal (including disposal methods of contaminated containers and packaging)

Consider the precautions prescribed under the Wastes Management Law. Non-contaminated packaging may be re-used.

Contaminated packaging should ideally be emptied; it can then be recycled after having been decontaminated. Packaging which cannot be decontaminated should be disposed of like the material.

14. TRANSPORT INFORMATION

UN number: not applicable

UN proper shipping name: not applicable

Transport hazard class: not applicable

Packing group: not applicable

Marine pollutant: not applicable

Information on any special precautions, which a user needs to be aware of, or which is necessary, in connection with transport or conveyance: no data

Classifications and rules under transport related other foreign regulations

Not classified as dangerous in the meaning of transport regulations.

Non-activated carbon black of mineral origin.

No hazardous material of division 4.2

15. REGULATORY INFORMATION

<Korea>

Regulations under the Industrial Safety and Health Law

A hazardous factor for which the exposure limit has been established (TWA 3.5 mg/m³)

Material Safety Data Sheet

Carbon Black

According to the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)	Version	4.0 / REG_KR
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Regulations under the Toxic Chemicals Control Law

Listed on Korean Existing Chemicals List: KE-04682

Regulations under the Dangerous Substance Safety Management Law

not applicable

Regulations under the Wastes Management Law

Dispose of contents/containers in accordance with regulations prescribed in the Wastes Management Law. This substance is not classified as designated wastes.

Regulations under other national and foreign Laws:

<EU, Europe>

Carbon black is not registered as a dangerous substance under EU Directive 67/548/EEC and its lower regulations.

EINECS-RN (European Inventory of Existing Commercial Chemical Substances): 215-609-9

Classification according to EEC Directive

: Carbon black is not a hazardous substance according to the currently effective regulations on chemicals and hazardous substances.

<Germany>

The product is not a hazardous substance as defined by the Chemicals Act or Hazardous Substance Ordinance, according to the data of this product.

<USA>

Carbon black is not a dangerous substance under the following regulations: CERCLA (40, CFR 303), CWA (40 CFR 116), CAA 40 CFR.

Carbon black is registered as CHIP under the TSCA (Toxic Substance Control Act).

16. OTHER INFORMATION

Sources of reference materials

- 1) Report No. SPZ 100/03 (July 2004): Volume-dependent determination of the auto-ignition temperature of Carbon black Printex 35 pelletized, tested by Degussa Safety Data Testing Center.
- 2) Baan RA: Carcinogenic hazards from inhaled carbon black, titanium dioxide, and talc not containing asbestos or asbestiform fibers: recent evaluations by an IARC Monographs Working Group. Inhalation Toxicology 2007, 19 Suppl 1:213-228.
- 3) UN: Globally harmonized system of classification and labelling of chemicals (GHS). Revision 3, 2009
- 4) Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) no. 1907/2006. 2008:1-1355
- 5) Guidance to Regulation (EC) no 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures. 14 May 2009- IHCP, DG Joint Research Centre, European Commission
- 6) Borm PJA, Cakmak G, Jermann E, Weishaupt C, Kempers P, van Schooten FJ, Oberdörster G and Schins RPF (2005). Formation of PAH-DNA adducts after in vivo and vitro exposure of rats and lung cells to different commercial carbon blacks. Toxicology and Applied Pharmacology, 205 (2), 157-167.

Material Safety Data Sheet

Carbon Black

According to the Globally Harmonized Version 4.0 / REG_KR

System of Classification and Labeling of Chemicals (GHS) Revision date 2010-06-29

Print Date 2011-08-05

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Date of preparation: 2009. 07.28

Number of revision times and the date of the latest revision: March 1, 2010, 3rd
June 29, 2010, 4th

Safety Data Sheet
according to 1907/2006/EC, Article 31 (REACH)

Printing date 25.11.2010

Revision: 24.11.2010

**1 Identification of the substance/preparation and of the company/
undertaking**

- **Product details**
- **Trade name:** Panax Green GY
- **Application of the substance / the preparation** *Printing inks*
- **Manufacturer/Supplier:**
*UK SEUNG Chemical Co. Ltd.
155-8, Haidong-Dong, Keumjeong-Ku
Busan / South-Korea
Tel.: +82 51 523 1515
Fax: +82 51 529 6326
E-Mail: ukseungt@chol.com*
- **Further information obtainable from:**
*Product safety department
Mr. Jung Yoo Sang
Tel.: +82 51 718 5360
Fax: +82 51 529 6326
E-Mail: ukseungt@chol.com*
- **Information in case of emergency:**
*Tel.: +82 51 718 5360 / +82 51 523 1515, Extension 5360
E-Mail: ukseungt@chol.com*

2 Hazards identification

- **Hazard description:** *Not applicable.*
- **Information concerning particular hazards for human and environment:**
Not applicable.
- **GHS label elements** *Void*

3 Composition/information on ingredients

- **CAS No. Description**
1328-53-6 C.I. Pigment Green 7
- **Identification number(s)**
- **EINECS Number:** *215-524-7*

4 First aid measures

- **General information:** *No special measures required.*
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:**
*Immediately wash with water and soap and rinse thoroughly.
Generally the product does not irritate the skin.*
- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **After swallowing:**
*Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.*

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Safety Data Sheet according to 1907/2006/EC, Article 31 (REACH)

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Trade name: Panax Green GY

(Contd. of page 1)

- **Protective equipment:** *Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Person-related safety precautions:** *Avoid formation of dust.*
- **Measures for environmental protection:**
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Dispose of the material collected according to regulations.
- **Additional information:** *No dangerous substances are released.*

7 Handling and storage

- **Handling:**
- **Information for safe handling:** *No special measures required.*
- **Information about fire - and explosion protection:**
Dust can combine with air to form an explosive mixture.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **Storage class:** *13 (VCI)*

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
Not required.
- **Additional information:** *The lists valid during the making were used as basis.*
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Trade name: Panax Green GY

(Contd. of page 2)

• **Eye protection:** *Safety glasses*

9 Physical and chemical properties

• General Information

Form:	<i>Powder</i>
Colour:	<i>Green</i>
Odour:	<i>Odourless</i>

• Change in condition

Melting point/Melting range: *Undetermined.*
Boiling point/Boiling range: *Undetermined.*

• **Flash point:** *Not applicable.*

• **Flammability (solid, gaseous):** *Product is not flammable.*

• **Density at 20°C:** *1.6 g/cm³*

• **Solubility in / Miscibility with water:** *Insoluble.*

Solids content: *100.0 %*

10 Stability and reactivity

• Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

• Materials to be avoided:

• **Dangerous reactions** *No dangerous reactions known.*

• **Dangerous decomposition products:** *No dangerous decomposition products known.*

11 Toxicological information

• Acute toxicity:

• LD/LC50 values relevant for classification:

1328-53-6 C.I. Pigment Green 7

<i>Oral</i>	<i>LD50</i>	<i>5000 mg/kg (rat)</i>
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• **on the skin:** *No irritant effect.*

• **on the eye:** *No irritating effect.*

• **Sensitization:** *No sensitizing effects known.*

• Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

12 Ecological information

• Additional ecological information:

• General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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Do not allow product to reach ground water, water course or sewage system, even in small quantities.

13 Disposal considerations**• Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• Uncleaned packaging:**• Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

14 Transport information**• Land transport ADR/RID (cross-border)**

• ADR/RID class: -

• Maritime transport IMDG:

• IMDG Class: -

• Marine pollutant: No

• Air transport ICAO-TI and IATA-DGR:

• ICAO/IATA Class: -

• UN "Model Regulation": -

15 Regulatory information**• Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The substance is not subject to classification according to EU lists and other sources of literature known to us.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• Department issuing MSDS: Product safety department

• Contact:

Mr. Jung Yoo Sang

Tel.: +82 51 718 5360 / +82 51 523 1515 Extension 5360

Fax: +82 51 529 6326

e-mail: ukseung@chol.com

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

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Safety Data Sheet
according to 1907/2006/EC, Article 31 (REACH)

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Revision: 24.11.2010

Trade name: Panax Green GY

<p><i>ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)</i> <i>GHS: Globally Harmonized System of Classification and Labelling of Chemicals</i> <i>EINECS: European Inventory of Existing Commercial Chemical Substances</i> <i>CAS: Chemical Abstracts Service (division of the American Chemical Society)</i> <i>LC50: Lethal concentration, 50 percent</i> <i>LD50: Lethal dose, 50 percent</i></p>
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(Contd. of page 4)

1. IDENTIFICATION OF THE SUBSTANCE/MICTURE AND OF THE COMPANY

1.1 Product Identifier

Product Name: Iron Oxide Red

Product Code No.: R103, R105, R107, R109, R111, R113, R115, R118, R125, R133, R135, R147, R152, R155, R162, R167, R175, R198, R500, R400, R300, R100, R200, R220

CAS No.: 1309-37-1

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

1.3 Details of the supplier of the safety data sheet

Company: EWIC COLORS CO., LTD.

#183, Majang-ri, Gwnagtan-myeon, Paju-si, Gyeonggi-do, Republic of Korea

Telephone: 82-31-907-4996

Fax: 82-31-907-4998

E-mail address:

1.4 Emergency telephone number: 82-31-948-7077

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[EU-GHS/CLP]:

Skin irritation (category 2)

Eye irritation (category 2)

Specific target organ toxicity – single exposure (category 3)

According to EU Directives 67/548/EEC or 1999/45/EC:

Irritating to eyes, respiratory system and skin

2.2 Label element

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

Pictogram:



Signal word: Warning

Hazard statement(s):

H315: Causes skin irritation

H319: Causes serious eye irritation

H335: May cause respiratory irritation

Precautionary statement(s):

P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard symbol(s)

Xi: Irritant

R-pharse(s)

R36/37/38: Irritating to eyes, respiratory system and skin.

S-Phrase(s)



Material Safety Data Sheet

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other hazards – none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Synonyms	CAS No.	Concentration (%)
Ferric Oxide (Fe ₂ O ₃)	Iron Oxide Red	1309-37-1	>96

4. FIRST AID MEASURES

4.1 General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2 If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult physician.

4.3 In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

4.4 If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguish media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special protective equipment for fire fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Method and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 Conditions for safe storage

Store in a cool place. Keep container tightly closed in a dry well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection

Safety glasses with side-shields conforming to EN 166

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 **Appearance:** Solid reddish brown/ dark red/ red powder

9.2 **Odor:** Odorless.

9.3 **Physical State:** Dry powder

9.4 **pH:** 3 ~ 7

9.5 **Vapor Pressure:** Not a vapor.

9.6 **Vapor Density:** Not a vapor.

9.7 **Boiling Point:** Not applicable.

9.8 **Freezing Point:** Not applicable.

9.9 **Flash Point:** Not applicable

9.10 **Flammability (solid, gas):** Not applicable.

9.11 **Melting Point:** Greater than 1,000 °C

9.12 **Solubility in Water:** Insoluble

9.13 **Specific Gravity (g/ml):** 4.5 – 5.2

9.14 **Auto Ignition Temperature:** Not applicable

9.15 **Decomposition Temperature:** No data available

9.16 **Explosive Properties:** No data available

9.17 **Volatile Organic Compounds (VOC):** None

9.18 **Chemical Formula:** Fe₂O₃

10. STABILITY AND REACTIVITY

10.1 **Chemical Stability (Conditions to Avoid):** This is a stable material.

10.2 **Incompatibility (materials to void):** Chloro-formates, Peroxides, Strong acids

10.3 **Decomposition Temperature:** Does not decompose

10.4 **Hazardous Decomposition Products:** Hazardous decomposition products formed under fire conditions; No data available enough

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: No data available



Material Safety Data Sheet

Skin corrosion/irritation: No data available
Serious eye damage/eye/irritation: No data available
Respiratory or skin sensitization: No data available
Germ cell mutagenicity: No data available
Carcinogenicity: No data available
Productive toxicity: No data available
Specific target organ toxicity-single exposure
Inhalation: May cause respiratory irritation
Specific target organ toxicity-repeated exposure: No data available
Aspiration hazards: No data available

Potential health effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion: May be harmful if swallowed.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes serious eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional information

RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

-. **Fish toxicity:** Golden Orfe (*leuciscus idus*) LC₀ greater than 1,000 mg/l.

12.2 Persistence and degradability: No data available

12.3 Bio accumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment:

12.6 Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 Land Transport ADR/RID (cross- border): Not a hazardous material.

ADR/RID-GGVSEB Class: None

14.2 Maritime Transport IMDG: Not a hazardous material.

IMDG Class: None.

14.3 Air Transport ICAO-TI and IATA-DGR: Not a hazardous material

ICAO/IATA Class: None.

*. Transport/Additional information: Not dangerous according to the above specifications.



Material Safety Data Sheet

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: No data available.

15.2 Chemical Safety Assessment: No data available.

16. OTHER INFORMATION

16.1 Reason for Revision: Applied GHS (Global Harmonization System)

16.2 Date Revised: 2012. 01. 01

16.3 Version of Revision: 4th

16.4 Others: None

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1. IDENTIFICATION OF THE SUBSTANCE/MICTURE AND OF THE COMPANY

1.1 Product Identifier

Product Name: Iron Oxide Yellow

Product Code No.: Y810, Y820, Y830, Y840, Y850, Y313, Y330, Y875, Y920

CAS No.: 51274-00-1

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

1.3 Details of the supplier of the safety data sheet

Company: EWIC COLORS CO., LTD.

#183, Majang-ri, Gwnagtan-myeon, Paju-si, Gyeonggi-do, Republic of Korea

Telephone: 82-31-907-4996

Fax: 82-31-907-4998

E-mail address:

1.4 Emergency telephone number: 82-31-948-7077

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[EU-GHS/CLP]:

Skin irritation (category 2)

Eye irritation (category 2)

Specific target organ toxicity – single exposure (category 3)

According to EU Directives 67/548/EEC or 1999/45/EC:

Irritating to eyes, respiratory system and skin

2.2 Label element

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

Pictogram:



Signal word: Warning

Hazard statement(s):

H315: Causes skin irritation

H319: Causes serious eye irritation

H335: May cause respiratory irritation

Precautionary statement(s):

P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard symbol(s)

Xi: Irritant

R-phrase(s)

R36/37/38: Irritating to eyes, respiratory system and skin.

S-Phrase(s)

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.



Material Safety Data Sheet

2.3 Other hazards – none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Synonyms	CAS No.	Concentration (%)
Iron Oxide Yellow FeOOH	Iron Oxide Hydroxide	51274-00-1	>96

4. FIRST AID MEASURES

4.1 General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2 If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult physician.

4.3 In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

4.4 If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguish media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special protective equipment for fire fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Method and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 Conditions for safe storage

Store in a cool place. Keep container tightly closed in a dry well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection

Safety glasses with side-shields conforming to EN 166

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 **Appearance:** Solid yellow powder
- 9.2 **Odor:** Odorless.
- 9.3 **Physical State:** Dry powder
- 9.4 **pH:** 3 ~ 7
- 9.5 **Vapor Pressure:** Not a vapor.
- 9.6 **Vapor Density:** Not a vapor.
- 9.7 **Boiling Point:** Not applicable.
- 9.8 **Freezing Point:** Not applicable.
- 9.9 **Flash Point:** Not applicable
- 9.10 **Flammability (solid, gas):** Not applicable.
- 9.11 **Melting Point:** Greater than 1,000 °C
- 9.12 **Solubility in Water:** Insoluble
- 9.13 **Specific Gravity (g/ml):** 3.9 – 4.1
- 9.14 **Auto Ignition Temperature:** Not applicable
- 9.15 **Decomposition Temperature:** No data available
- 9.16 **Explosive Properties:** No data available
- 9.17 **Volatile Organic Compounds (VOC):** None
- 9.18 **Chemical Formula:** FeOOH

10. STABILITY AND REACTIVITY

- 10.1 **Chemical Stability (Conditions to Avoid):** This is a stable material. Keep away from flames and heat. At temperatures greater than 150 °C the product will convert to Iron Oxide Red(Fe₂O₃).
- 10.2 **Incompatibility (materials to void):** Chloro-formates, Peroxides, Strong acids
- 10.3 **Decomposition Temperature:** Does not decompose
- 10.4 **Hazardous Decomposition Products:** Hazardous decomposition products formed under fire conditions; No data available enough

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: No data available

Skin corrosion/irritation: No data available

Serious eye damage/eye/irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Productive toxicity: No data available

Specific target organ toxicity-single exposure

Inhalation: May cause respiratory irritation

Specific target organ toxicity-repeated exposure: No data available

Aspiration hazards: No data available

Potential health effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes serious eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional information

RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

- **Fish toxicity:** Golden Orfe (*leuciscus idus*) LC₀ greater than 1,000 mg/l.

12.2 Persistence and degradability: No data available

12.3 Bio accumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment:

12.6 Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 Land Transport ADR/RID (cross-border): Not a hazardous material.

ADR/RID-GGVSEB Class: None

14.2 Maritime Transport IMDG: Not a hazardous material.

IMDG Class: None.



Material Safety Data Sheet

14.3 Air Transport ICAO-TI and IATA-DGR: Not a hazardous material

ICAO/IATA Class: None.

*. Transport/Additional information: Not dangerous according to the above specifications.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: No data available.

15.2 Chemical Safety Assessment: No data available.

16. OTHER INFORMATION

16.1 Reason for Revision: Applied GHS (Global Harmonization System)

16.2 Date Revised: 2012. 01. 01

16.3 Version of Revision: 4th

16.4 Others: None

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Safety data sheet
according to 1907/2006/EC, Article 31
(REACH)

Printing date 21.09.2012

Version number 1

Revision: 21.09.2012

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

- **Product identifier**
- **Trade name: Panax Red 2R**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Process category**
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
- **Environmental release category ERC2** *Formulation of preparations*
- **Application of the substance / the preparation**
Printing inks
Raw materials for coatings
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
UK SEUNG Chemical Co. Ltd.
155-8, Haidong-Dong, Keumjeong-Ku
Busan / South-Korea
Tel.: +82 51 523 1515
Fax: +82 51 529 6326
E-Mail: ukseung@chol.com
- **Further information obtainable from:**
Product safety department
Mr. Jung Yoo Sang
Tel.: +82 51 718 5360
Fax: +82 51 529 6326
E-Mail: ukseung@chol.com
- **Emergency telephone number:**
Tel.: +82 51 718 5360 / +82 51 523 1515, Extension 5360
E-Mail: ukseung@chol.com

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

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- **Special labelling of certain preparations:**
Safety data sheet available for professional user on request.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

3 Composition/information on ingredients

- **Chemical characterization: Substances**

• CAS No. Description		
CAS: 7023-61-2 EINECS: 230-303-5	C.I. Pigment Red 48:2	92%
CAS: 61791-55-7 EINECS: 263-189-0	Rosin ☒ Xn R22 ⚠ Warning: 3.4.S/1	8.0%

- **Chemical characterization: Mixtures**
- **Description:** *Mixture: consisting of the following components.*
- **Dangerous components:**

CAS NO.	Description	%	Index	R-phrases
CAS: 61791-55-7 EINECS: 263-189-0	Rosin ☒ Xn R22 ⚠ Warning: 3.4.S/1			
		8.0%		

- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

4 First aid measures

- **Description of first aid measures**
- **General information:** *No special measures required.*
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:** *Generally the product does not irritate the skin.*
- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **After swallowing:** *If symptoms persist consult doctor.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
No further relevant information available.

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Trade name: Panax Red 2R

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- **Advice for firefighters**
- **Protective equipment:** *Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
- **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:** *Pick up mechanically.*
- **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** *No special measures required.*
- **Information about fire - and explosion protection:**
Dust can combine with air to form an explosive mixture.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **Storage class:** *13 (VCI)*
- **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** *The lists valid during the making were used as basis.*
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

• Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Safety glasses**9 Physical and chemical properties****• Information on basic physical and chemical properties****• General Information****• Appearance:**

Form: Powder

Colour: Red

• Odour: Characteristic

• Odour threshold: Not determined.

• pH-value: Not applicable.

• Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

• Flash point: Not applicable.

• Flammability (solid, gaseous): Not determined.

• Decomposition temperature: Not determined.

• Self-igniting: Product is not selfigniting.

• Danger of explosion: Product does not present an explosion hazard.

• Explosion limits:

Lower: Not determined.

Upper: Not determined.

• Vapour pressure: Not applicable.

• Density at 20°C: 1.4 g/cm³

• Relative density Not determined.

• Vapour density Not applicable.

• Evaporation rate Not applicable.

• Solubility in / Miscibility with

water: Insoluble.

• Segregation coefficient (n-octanol/

water): Not determined.

• Viscosity:

Dynamic: Not applicable.

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Kinematic:	<i>Not applicable.</i>
Organic solvents:	<i>0.0 %</i>
VOC (EC)	<i>0.00 %</i>
Solids content:	<i>100.0 %</i>
• Other information	<i>No further relevant information available.</i>

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:** *No dangerous decomposition products known.*

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
 - **on the skin:** *No irritant effect.*
 - **on the eye:** *No irritating effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment** *Not applicable.*
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **Other adverse effects** *No further relevant information available.*

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Trade name: Panax Red 2R

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation** *Smaller quantities can be disposed of with household waste.*
- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

- | | |
|--|------------------------|
| • UN-Number | |
| • ADR, ADN, IMDG, IATA | <i>Void</i> |
| • UN proper shipping name | |
| • ADR, ADN, IMDG, IATA | <i>Void</i> |
| • ADR, ADN, IMDG, IATA | |
| • Class | <i>Void</i> |
| • Packing group | |
| • ADR, IMDG, IATA | <i>Void</i> |
| • Environmental hazards: | |
| • Marine pollutant: | <i>No</i> |
| • Special precautions for user | <i>Not applicable.</i> |
| • Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <i>Not applicable.</i> |
| • UN "Model Regulation": | <i>-</i> |

15 Regulatory information

- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• Relevant phrases

H302 Harmful if swallowed.

R22 Harmful if swallowed.

• Department issuing MSDS: *Product safety department***• Contact:**

Mr. Jung Yoo Sang

Tel.: +82 51 718 5360 / +82 51 523 1515 Extension 5360

Fax: +82 51 529 6326

e-mail: ukseung@chol.com

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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Trade name: Panax Red 2R

IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)

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according to 1907/2006/EC, Article 31 (REACH)

Printing date 25.11.2010

Revision: 25.11.2010

**1 Identification of the substance/preparation and of the company/
undertaking**

- **Product details**
- **Trade name:** **Panax Violet 23R**
- **Application of the substance / the preparation** *Printing inks*
- **Manufacturer/Supplier:**
*UK SEUNG Chemical Co. Ltd.
155-8, Haidong-Dong, Keumjeong-Ku
Busan / South-Korea
Tel.: +82 51 523 1515
Fax: +82 51 529 6326
E-Mail: ukseung@chol.com*
- **Further information obtainable from:**
*Product safety department
Mr. Jung Yoo Sang
Tel.: +82 51 718 5360
Fax: +82 51 529 6326
E-Mail: ukseung@chol.com*
- **Information in case of emergency:**
*Tel.: +82 51 718 5360 / +82 51 523 1515, Extension 5360
E-Mail: ukseung@chol.com*

2 Hazards identification

- **Hazard description:** *Not applicable.*
- **Information concerning particular hazards for human and environment:**
Not applicable.
- **GHS label elements** *Void*

3 Composition/information on ingredients

- **CAS No. Description**
6358-30-1 C.I. Pigment Violet 23
- **Identification number(s)**
- **EINECS Number:** 228-767-9
- **Chemical characterization**
- **Description:** *Organic pigments/Preparations*

4 First aid measures

- **General information:** *No special measures required.*
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:** *Generally the product does not irritate the skin.*
- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **After swallowing:** *Rinse out mouth and then drink plenty of water.*

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Trade name: Panax Violet 23R

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- **Special hazards caused by the substance, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** *Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Person-related safety precautions:** *Avoid formation of dust.*
- **Measures for environmental protection:**
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** *Pick up mechanically.*
- **Additional information:** *No dangerous substances are released.*

7 Handling and storage

- **Handling:**
- **Information for safe handling:** *No special measures required.*
- **Information about fire - and explosion protection:**
Dust can combine with air to form an explosive mixture.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
*Store in roofed places at room temperature
Store only in unopened original receptacles.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **Storage class:** *13 (VCI)*

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
Not required.
- **Additional information:** *The lists valid during the making were used as basis.*
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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Trade name: Panax Violet 23R

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- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** *Safety glasses*

9 Physical and chemical properties

• General Information

Form:	<i>Powder</i>
Colour:	<i>Violet</i>
Odour:	<i>Odourless</i>

• Change in condition

Melting point/Melting range:	<i>Undetermined.</i>
Boiling point/Boiling range:	<i>Undetermined.</i>

- **Flash point:** *Not applicable.*

- **Flammability (solid, gaseous):** *Product is not flammable.*
- **Danger of explosion:** *Risk of formation of explosive pigment dust/air mixtures*

- **Density at 20°C:** *1.5 g/cm³*

- **Solubility in / Miscibility with water:** *Insoluble.*

Solids content:	<i>100.0 %</i>
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10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** *No dangerous reactions known.*
- **Dangerous decomposition products:** *No dangerous decomposition products known.*

11 Toxicological information

• Acute toxicity:

• LD/LC50 values relevant for classification:

6358-30-1 C.I. Pigment Violet 23

Oral	LD50	5000 mg/kg (rat)
------	------	------------------

- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**
*When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
The substance is not subject to classification according to the latest version of the EU lists.*

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Safety Data Sheet according to 1907/2006/EC, Article 31 (REACH)

Printing date 25.11.2010

Revision: 25.11.2010

Trade name: Panax Violet 23R

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12 Ecological information

• Additional ecological information:**• General notes:**

*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.*

13 Disposal considerations

• Recommendation

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• Uncleaned packaging:**• Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

14 Transport information

• Land transport ADR/RID (cross-border)

• ADR/RID class: -

• Maritime transport IMDG:

• IMDG Class: -

• Marine pollutant: No

• Air transport ICAO-TI and IATA-DGR:

• ICAO/IATA Class: -

• UN "Model Regulation": -

15 Regulatory information

• Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The substance is not subject to classification according to EU lists and other sources of literature known to us.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• Department issuing MSDS: Product safety department**• Contact:**

Mr. Jung Yoo Sang

Tel.: +82 51 718 5360 / +82 51 523 1515 Extension 5360

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e-mail: ukseungt@chol.com

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Safety Data Sheet
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Trade name: Panax Violet 23R

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• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Safety Data Sheet
according to 1907/2006/EC, Article 31 (REACH)

Printing date 25.11.2010

Revision: 25.11.2010

**1 Identification of the substance/preparation and of the company/
undertaking**

- **Product details**
- **Trade name: Panax Yellow GRF**
- **Application of the substance / the preparation** *Printing inks*
- **Manufacturer/Supplier:**
*UK SEUNG Chemical Co. Ltd.
155-8, Haidong-Dong, Keumjeong-Ku
Busan / South-Korea
Tel.: +82 51 523 1515
Fax: +82 51 529 6326
E-Mail: ukseungt@chol.com*
- **Further information obtainable from:**
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- **Information in case of emergency:**
*Tel.: +82 51 718 5360 / +82 51 523 1515, Extension 5360
E-Mail: ukseungt@chol.com*

2 Hazards identification

- **Hazard description:**

*Xi Irritant*

- **Information concerning particular hazards for human and environment:**
*The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 43 May cause sensitisation by skin contact.*
 - **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
 - **GHS label elements**
-  **Warning**
- H317 - May cause an allergic skin reaction.*
- **Prevention:**
*P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.*
 - **Response:**
*P321 Specific treatment (see on this label).
P363 Wash contaminated clothing before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.*
 - **Disposal:**
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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Trade name: **Panax Yellow GRF**

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3 Composition/information on ingredients

- **Chemical characterization:**

- **CAS No. Description**

CAS: 6358-85-6 EINECS: 228-787-8	C.I. Pigment Yellow 12	91.0%
CAS: 8050-09-7 EINECS: 232-475-7	Rosin ☒ Xi; R 43 Warning: ⚠ 3.4.S/1	9.0%

- **Chemical characterization**

- **Description:** *Organic pigments/Preparations*

- **Dangerous components:**

CAS: 8050-09-7 EINECS: 232-475-7	Rosin	☒ Xi; R 43 Warning: ⚠ 3.4.S/1	9.0%
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- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

4 First aid measures

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

- **After eye contact:** *Rinse opened eye for several minutes under running water.*

- **After swallowing:** *Rinse out mouth and then drink plenty of water.*

5 Fire-fighting measures

- **Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

- **Special hazards caused by the substance, its products of combustion or resulting gases:**

Formation of toxic gases is possible during heating or in case of fire.

- **Protective equipment:** *Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Person-related safety precautions:** *Avoid formation of dust.*

- **Measures for environmental protection:**

Do not allow to enter sewers/ surface or ground water.

- **Measures for cleaning/collecting:** *Pick up mechanically.*

7 Handling and storage

- **Handling:**

- **Information for safe handling:** *Prevent formation of dust.*

- **Information about fire - and explosion protection:**

Dust can combine with air to form an explosive mixture.

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- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in roofed places at room temperature
Store only in unopened original receptacles.
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *None.*
- **Storage class:** *13 (VCI)*

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

8050-09-7 Rosin

WEL	Short-term value: 0.15 mg/m ³
	Long-term value: 0.05 mg/m ³
	Sen

- **Additional information:** *The lists valid during the making were used as basis.*
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
PVC gloves
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** *Safety glasses*

9 Physical and chemical properties

- **General Information**

Form:	<i>Powder</i>
Colour:	<i>Yellow</i>
Odour:	<i>Odourless</i>

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• Change in condition Melting point/Melting range: <i>Undetermined.</i> Boiling point/Boiling range: <i>Undetermined.</i>	
• Flash point:	180°C
• Self-igniting:	<i>Product is not selfigniting.</i>
• Danger of explosion:	<i>Risk of formation of explosive pigment dust/air mixtures</i>
• Density at 20°C:	1.46 g/cm ³
• Solubility in / Miscibility with water:	<i>Insoluble.</i>
• Solids content:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
Thermal decomposition above 250°C
- **Materials to be avoided:**
- **Dangerous reactions** *No dangerous reactions known.*
- **Dangerous decomposition products:** 3,3'-Dichlorobenzidine

11 Toxicological information

- **Acute toxicity:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
- **Sensitisation** *May cause sensitisation by skin contact.*

12 Ecological information

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.

13 Disposal considerations

- **Recommendation**
Must be specially treated adhering to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packaging:**
- **Recommendation:**
*Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.*

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** *No*
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -

15 Regulatory information

- **Labelling according to EU guidelines:**
*Observe the general safety regulations when handling chemicals.
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.*
- **Code letter and hazard designation of product:**
 *Xi Irritant*
- **Hazard-determining components of labelling:**
Rosin
- **Risk phrases:**
43 May cause sensitisation by skin contact.
- **Safety phrases:**
*24 Avoid contact with skin.
37 Wear suitable gloves.
60 This material and its container must be disposed of as hazardous waste.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant R-phrases**
43 May cause sensitisation by skin contact.
- **Department issuing MSDS:** *Product safety department*
- **Contact:**
*Mr. Jung Yoo Sang
Tel.: +82 51 718 5360 / +82 51 523 1515 Extension 5360
Fax: +82 51 529 6326*

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*e-mail: ukseungt@chol.com***• Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organization**ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)**GHS: Globally Harmonized System of Classification and Labelling of Chemicals**CAS: Chemical Abstracts Service (division of the American Chemical Society)*