SAFETY DATA SHEET

1. Identification of the substance or mixture and of the supplier

A. GHS product identifier Cosmetica® Rutile Fine White N-8001D
B. Recommended use of the chemical and restrictions on use
Recommended use Cosmetic
Restrictions on use Not available
C. Manufacturers
Company name CQV Co., Ltd.
Address 144, Seongjung-Ro, Jincheon-Eup, Jincheon-Gun, Chungbuk-Do, Korea
Emergency phone number 82-43-531-2500
Respondent Byung-Ki Choi
Fax 82-43-536-0314

2. Hazards identification

A. GHS classification of the substance/mixture
Not classified
B. GHS label elements, including precautionary statements
Pictogram and symbol : Not applicable
Signal word : Not applicable
Hazard statements : Not applicable
Precautionary statements
Precaution : Not applicable
Treatment : Not applicable
Storage : Not applicable
Disposal : Not applicable
C. Other hazard information not included in hazard classification (NFPA)
Health 0
Flammability Not available
Reactivity Not available

3. Composition/information on ingredients

Chemical Name (INCI Name)	CAS number	EC number	Content (%)
Mica (CI 77019)	12001-26-2	310-127-6	54 - 65
Tin Oxide (CI 77861)	18282-10-5	242-159-0	0 - 1
Titanium Dioxide (CI 77891)	13463-67-7	236-675-5	35 - 45

4. First aid measures

A. Eye contact
- In case of contact with substance, immediately flush eyes with running water at least 20 minutes.
B. Skin contact
- In case of contact with substance, immediately flush skin with running water at least 20 minutes.

- Remove and isolate contaminated clothing and shoes.
- Wash contaminated clothing and shoes before reuse.
- Get immediate medical advice/attention.

C. Inhalation
- Specific medical treatment is urgent.
- Move victim to fresh air.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.

D. Ingestion
- Do not let him/her eat anything, if unconscious.
- Get immediate medical advice/attention.

E. Indication of immediate medical attention and notes for physician
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire fighting measures

A. Suitable (and unsuitable) extinguishing media
- Suitable extinguishing media: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO2
- Unsuitable extinguishing media: High pressure water streams

B. Specific hazards arising from the chemical
- If inhaled, may be harmful.

C. Special protective equipment and precautions for fire-fighters
- Dike fire-control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- Fire involving Tanks; Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks; Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks; Always stay away from tanks engulfed in fire.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures
- Eliminate all ignition sources.
- Stop leak if you can do it without risk.
- Please note that materials and conditions to avoid.
- Ventilate the area.
- Do not touch or walk through spilled material.
- Prevent dust cloud.

B. Environmental precautions and protective procedures
- Prevent entry into waterways, sewers, basements or confined areas.

C. The methods of purification and removal
- Small Spill; Flush area with flooding quantities of water. And take up with sand or other non-combustible absorbent material and place into containers for later disposal.
- Large Spill; Dike far ahead of liquid spill for later disposal.
- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

7. Handling and storage

A. Precautions for safe handling
- Please note that materials and conditions to avoid.
- Wash thoroughly after handling.
- Please work with reference to engineering controls and personal protective equipment.
- Be careful to high temperature.

B. Conditions for safe storage
- Store in a closed container.
- Store in cool and dry place.

8. Exposure controls/personal protection

A. Occupational Exposure limits

Korea regulation

Mica TWA = 3 mg/m³

Titanium Dioxide TWA = 10 mg/m³

ACGIH regulation

Mica TWA 3 mg/m³

Titanium Dioxide TWA 10 mg/m³

Biological exposure index : Not available

OSHA regulation

Mica TWA = 20 mppcf (mineral dusts)

Titanium Dioxide TWA = 15 mg/m³

NIOSH regulation

Mica TWA = 3 mg/m³ (respirable dust)

Tin Oxide TWA = 2 mg/m³ (as Sn)

EU regulation : Not available

Other

Mica Belgium: TWA = 3 mg/m³ Bulgaria: TWA = 3 mg/m³ Ireland: TWA = 10 mg/m³ (total inhalable dust), 0.8 mg/m³ (respirable dust) Italy: TWA = 3 mg/m³ (respirable fraction) Australia: TWA = 2.5 mg/m³ (inspirable) canada: TWA = 3 mg/m³ (respirable) Chnia: TWA = 2 mg/m³ (total dust), 1.5 mg/m³ (respirable dust), STEL = 4 mg/m³ (total dust), 3 mg/m³ (respirable dust) Russia: TWA = 4 mg/m³ (containing ≤10% free Silicon dioxide, aerosol), STEL = 6 mg/m³ (containing 10-70% Silicon dioxide dust, total aerosol) Taiwan: TWA = 3 mg/m³, STEL = 6 mg/m³

Tin Oxide Belgium: TWA = 2 mg/m³ (as Sn) Canada: TWA = 2 mg/m³ (as Sn) Finland: TWA = 2 mg/m³ (as Sn) Spain: TWA = 2 mg/m³ (as Sn)

Titanium Dioxide Austria: TWA = 10 mg/m³ France: TWA = 10 mg/m³ (as Ti) Italy: TWA = 10 mg/m³ United Kingdom: TWA = 10 mg/m³ Russia: TWA = 10 mg/m³

B. Appropriate engineering controls
- Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

C. Personal protective equipment

Respiratory protection
- Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.
- In case exposed to particulate material, the respiratory protective equipments as follow are recommended. :facepiece filtering respirator or air-purifying respirator,

high-efficiency particulate air(HEPA) filter media or respirator equipped with powered fan, filter media of use(dust, mist, fume)
- In lack of oxygen(< 19.5%), wear the supplied-air respirator or self-contained breathing apparatus.oxygen

Eye protection
- Wear facepiece with goggles to protect.
- An eye wash unit and safety shower station should be available nearby work place.
- Wear breathable safety goggles to protect from particulate material causing eye irritation or other disorder.
- An eye wash unit and safety shower station should be available nearby work place.

Hand protection
- Wear chemical resistant gloves.
- Wear appropriate protective gloves by considering physical and chemical properties of chemicals.

Body protection
- Wear appropriate protective chemical resistant clothing.
- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.

9. Physical and chemical properties

A. Appearance
Description Powder
Color Fine Silk White
B. Odor No odor
C. Odor threshold Not available
D. pH 7 - 11
E. Melting point/freezing point Not available
F. Initial boiling point and boiling range Not available
G. Flash point Not available
H. Evaporation rate Not available
I. Flammability (solid, gas) Not applicable
J. Upper/lower flammability or explosive limits Not available
K. Vapor pressure Not available
L. Solubility (ies) Not available
M. Vapor density Not available
N. Specific gravity 2.9 - 3.2 g/cm^3
O. Partition coefficient: n-octanol/water Not available
P. Auto ignition temperature Not available
Q. Decomposition temperature Not available
R. Viscosity Not available
S. Molecular weight Not available

10. Stability and reactivity

A. Chemical stability and Possibility of hazardous reactions:
- If inhaled, may be harmful.

B. Conditions to avoid:
- Heat, sparks or flames

C. Incompatible materials:
- Combustibles

D. Hazardous decomposition products:
- Not available

11. Toxicological information

A. Information of Health Hazardous

Acute toxicity

Oral : Not classified
- Tin oxide : Rat LD_{50} > 9,000 mg/kg
- Titanium dioxide : Rat LD_{50} > 5,000 mg/kg (OECD Guideline 425, EPA OPPTS 870.1100)

Dermal : Not available

Inhalation : Not classified
- Tin oxide : Rat LC_{50} > 5 mg/L/4hr (OECD TG 403, GLP)
- Titanium dioxide : Rat LC_{50} > 6.82 mg/L/4hr

Skin corrosion/ irritation : Not classified
- Tin oxide : Skin irritation test using rabbit, not skin irritation. (OECD TG 404)
- Titanium dioxide : In test on skin irritation with rabbits, skin irritations were not observed. (OECD Guideline 404)

Serious eye damage/ irritation : Not classified
- Tin oxide : The test substance was not irritating to the rabbit eyes. (OECD TG 405)
- Titanium dioxide : In test on eye irritation with rabbits, eye irritations were not observed. (OECD Guideline 405, EU Method B.5, EPA OPPTS 870.2400)

Respiratory sensitization : Not classified
- Titanium dioxide : Titanium oxide does not show respiratory sensitizing properties in animal studies or in exposure related observations in humans.

Skin sensitization : Not classified
- Tin oxide : No activation of the lymph nodes of mice were observed in the LLNA performed with the test material. (OECD TG 429)
- Titanium dioxide : In test on skin sensitization with guinea pig, skin sensitizations were not observed. (OECD Guideline 406, EU Method B.6, EPA OPP 81-6, GLP)

Carcinogenicity : Not classified

Mutagenicity : Not classified
- Mica : With cell test system, macrophage-like cells (P388 D1), kaolin and mica (r= 0.58) showed significant positive correlation with cytotoxicity for high-rank coal dusts but not for low.
- Tin oxide : Negative reactions were observed in these in vitro genotoxicity studies(bacterial reverse mutation assay(e.g. Ames test)(gene mutation)(OECD Guideline 471), mammalian cell gene mutation assay(OECD Guideline 476), mammalian cell micronucleus test(OECD Guideline 487)).
- Titanium dioxide : Negative reactions were observed in in vitro (mammalian cell gene mutation test(OECD Guideline 476, GLP), mammalian chromosome aberration test(OECD Guideline 473, GLP), bacterial reverse mutation assay(OECD Guideline 471)) and in in vivo (micronucleus assay).

Reproductive toxicity : Not classified
- Titanium dioxide : Based on the weight of evidence from the available long-term toxicity/carcinogenicity studies in rodents and the relevant information on the toxicokinetic behaviour in rats it is concluded that TiO2 does not present a reproductive toxicity hazard.

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeat exposure) : Not classified

- Mica : Not available
- Tin oxide : No toxicity related symptoms were observed in the 13-week repeat oral administration toxicity test using rats. (NOAEL ≥ 10000 mg / kg)
- Titanium dioxide : Titanium dioxide did not show any adverse effects whatsoever in a chronic oral repeated dose toxicity study in rats, with a NOAEL of 3500 mg/kg bw/day. Titanium dioxide is not absorbed to any relevant extent through human skin, thus no toxic effects can be expected via the dermal route of exposure. Titanium dioxide showed fibrogenic effects in a chronic inhalation repeated dose toxicity study in rats with a NOAEC of 10 mg/m3.

Aspiration Hazard : Not available

12. Ecological information

A. Ecological toxicity
- Acute toxicity : Not classified
- Chronic toxicity : Not classified

Fish : Not available
- Titanium dioxide : 96hr-NOEC(Oncorhynchus mykiss) > 100 mg/L (OECD Guideline 203)

crustacean : Not available

Algae
- Titanium dioxide : 72hr-EC_{50} (other) = 61 mg/L , 72hr-NOEC(Pseudokirchnerella subcapitata) = 12.7 mg/L

B. Persistence and degradability

Persistence
- Tin oxide : Low persistency (log Kow is less than 4 estimated.) (Log Kow = 1.29) (estimated)
- Titanium dioxide : Low persistency (log Kow is less than 4 estimated.) (Log Kow = 2.23) (estimated)

Degradability : Not available

C. Bioaccumulative potential

Bioaccumulation
- Tin oxide : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 100) (estimated)
- Titanium dioxide : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 13.73) (estimated)

Biodegradation
- Tin oxide : not readily biodegradable (estimated)
- Titanium dioxide : not readily biodegradable (estimated)

D. Mobility in soil
- Tin oxide : Low potency of mobility to soil. (Koc = 13.16) (estimated)
- Titanium dioxide : Low potency of mobility to soil. (Koc = 86.1) (estimated)

E. Other hazardous effect : Not available

F. HAZARDOUS TO THE OZONE LAYER : Not classified

13. Disposal considerations

A. Disposal method

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

B. Disposal precaution

Consider the required attentions in accordance with waste treatment management regulation.

14. Transport information

A. UN Number Not applicable
B. UN Proper shipping name Not applicable
C. Transport Hazard class Not applicable
D. Packing group Not applicable
E. Marine pollutant Not applicable
F. IMDG/IATA/ICAO Not applicable
G. Special precautions
in case of fire Not applicable
in case of leakage Not applicable

15. Regulatory information

A. Occupational Safety and Health Regulation
Mica : Occupational exposure limits listed
Mica : Work environment monitoring listed
Tin Oxide : Work environment monitoring listed (6 months)
Tin Oxide : Administration subject listed
Titanium Dioxide : Administration subject listed
Titanium Dioxide : Occupational exposure limits listed
Titanium Dioxide : Work environment monitoring listed (6 months)
B. Chemical Control Act
Mica : Existing Chemical Substance (KE-25420)
Tin oxide : Existing Chemical Substance (KE-33849)
Titanium dioxide : Existing Chemical Substance KE-33900
C. Dangerous Material Safety Management Regulation
Tin oxide : Dangerous Material Safety Management Regulation
Titanium dioxide : Dangerous Material Safety Management Regulation
D. Wastes Control Act
Mica : Wastes Control Act Controlled Wastes
E. Other regulation (internal and external)
Internal information
Persistant Organic Pollutants Acts : Not regulated
② Foreign Regulatory Information
External information
EU classification(classification)
Mica : Not classified
Tin oxide : Not classified
Titanium dioxide : Not classified
EU classification(risk phrases)
Mica : Not applicable
Tin oxide : Not applicable
Titanium dioxide : Not applicable
EU classification(safety phrases)
Mica : Not applicable
Tin oxide : Not applicable

Titanium dioxide : Not applicable
EU SVHC list : Not regulated
EU Authorisation List : Not regulated
EU Restriction list : Not regulated
U.S.A management information (OSHA Regulation) : Not regulated
U.S.A management information (CERCLA Regulation) : Not regulated
U.S.A management information (EPCRA 302 Regulation) : Not regulated
U.S.A management information (EPCRA 304 Regulation) : Not regulated
U.S.A management information (EPCRA 313 Regulation) : Not regulated
Substance of Roterdame Protocol : Not regulated
Substance of Stockholme Protocol : Not regulated
Substance of Montreal Protocol : Not regulated

Foreign Inventory Status

Mica

China management information Inventory of Existing Chemical Substances (IECSC): Present
Canada management information Domestic Substances List (DSL): Present
Australia management information Inventory of Chemical Substances (AICS): Present
New Zealand management information Inventory of Chemicals (NZIoC): May be used as a single component chemical under an appropriate group standard.
Philippines management information Inventory of Chemicals and Chemical Substances (PICCS): Present

Tin oxide

U.S.A management information Section 8(b) Inventory (TSCA): Present
Japan management information Existing and New Chemical Substances (ENCS): (1)-551
Japan management information ISHL Harmful Substances Whose Names Are to be Indicated on the Label: ≥ 1% weight
Japan management information ISHL Notifiable Substances: ≥ 0.1% weight
China management information Inventory of Existing Chemical Substances (IECSC): Present 37645
Canada management information Domestic Substances List (DSL): Present
Australia management information Inventory of Chemical Substances (AICS): Present
New Zealand management information Inventory of Chemicals (NZIoC): HSNO Approval: HSR002805
Philippines management information Inventory of Chemicals and Chemical Substances (PICCS): Present

Titanium dioxide

U.S.A management information Section 8(b) Inventory (TSCA): Present
Japan management information Existing and New Chemical Substances (ENCS): (5)-5225, (1)-558
Japan management information ISHL Harmful Substances Whose Names Are to be Indicated on the Label: ≥ 1% weight
Japan management information ISHL Notifiable Substances: ≥ 0.1% weight
China management information Inventory of Existing Chemical Substances (IECSC): Present 11377
Canada management information Domestic Substances List (DSL): Present
Australia management information Inventory of Chemical Substances (AICS): Present

New Zealand management information Inventory of Chemicals (NZIoC): May be used as a single component chemical under an appropriate group standard.
Philippines management information Inventory of Chemicals and Chemical Substances (PICCS): Present

16. Other information

A. Information source and references

Emergency Response Guidebook 2008;
http://phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/erg2008_eng.pdf
U.S. National library of Medicine(NLM) Hazardous Substances Data Bank(HSDB);
http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB
National Emergency Management Agency-Korea dangerous material inventory management system; http://www.nema.go.kr/hazmat/main/main.jsp
Korea Occupational Health & Safety Agency; http://www.kosha.net
Ministry of Public Safety and Security-Korea dangerous material inventory management system; http://hazmat.mpss.kfi.or.kr/index.do
EPISUITE v4.11; http://www.epa.gov/opt/exposure/pubs/episuitedl.html
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans;
http://monographs.iarc.fr
TOMES-LOLI®; http://www.rightanswerknowledge.com/loginRA.asp
National Chemicals Information System; http://ncis.nier.go.kr/ncis/
Waste Control Act enforcement regulation attached [1]
REACH information on registered substances; https://echa.europa.eu/information-on-chemicals/registered-substances
American Conference of Governmental Industrial Hygienists TLVs and BEIs.
NIOSH Pocket Guide; http://www.cdc.gov/niosh/npg/npgdcas.html
National Institute of Technology and Evaluation(NITE);
http://www.safe.nite.go.jp/english/db.html
REACH information on registered substances;
http://apps.echa.europa.eu/registered/registered-sub.aspx
National Toxicology Program; http://ntp.niehs.nih.gov/results/dbsearch/
EU CLP; https://echa.europa.eu/information-on-chemicals/cl-inventory-database

B. Issuing date 18-01-2011

C. Revision number and date

revision number 7

date of the latest revision 01-04-2024

D. Others

• Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.
• The product must not be used for any purposes other than those specified under heading 1 without first obtaining written handling instructions.
• It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.
• The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties.