SAFETY DATA SHEET

1.CHEMICAL PRODUCT AND COMPANY

Trade Name	:ROSWAN QD HB Grey SDS Number:05820600201-44		
Product Type	:Alkyd Resin Paints		
Intended use	:Coating		
Company Name	:CHUGOKU MARINE PAINTS, LTD.		
Address	:1-7 Meijishinkai, Otake, Hiroshima, 739-0652, Japan		
Charge Section	:Environmental and Quality Assurance Dept.		
Telephone Number	:0120-85-4931	FAX Number	:0827-59-0018
Mail Address	:cmpmsds@cmp.co.jp		
Issue Date	:Jul.25, 2008		
Revision Date	:Jun.24, 2016		

2.HAZARD IDENTIFICATION

Material elements categorized as "Not classified" or "Classification not possible" by GHS are not described .

GHS CLASSIFICATION

Flammable liquids	:Category 3
Skin corrosion/irritation	:Category 2
Serious eye damage/eye irritation	:Category 2
Carcinogenicity	:Category 1
Reproductive toxicity	:Category 1
Specific target organ toxicity, single exposure	
:Category 2(respiratory organs,systemic toxicity,liver,central nervous system,kidney)	
:Category 3(anesthetic action,respiratory tract irritation)	
Specific target organ toxicity, repeated exposure	
:Category 2(respiratory organs,nervous system,liver,testis)	
Aquatic environmental hazards/Acute	:Category 1
Aquatic environmental hazard/Long-term	:Category 1

GHS LABEL ELEMENTS

Pictograms

Signal word **Danger**

HAZARD INFORMATION

* Flammable liquid and vapour
* Causes skin irritation
* Causes serious eye irritation
* May cause cancer
* May damage fertility or the unborn child
* May causes damage to respiratory organs,systemic toxicity,liver,central nervous system,kidney,anesthetic action, respiratory tract irritation,optic organ, through inhalation.

* May causes damage to respiratory organs,nervous system,liver,testis,central nervous system,optic organ,haematopoietic system,kidneythrough prolonged or repeated exposure if swallowed.
* Very toxic to aquatic life
* Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT(S)

Preventive measures

* Keep away from ignition sources such as heat/sparks/open flame. - No smoking.
* Keep container tightly closed.
* Take precautionary measures against static discharge.
* Use explosion-proof electrical/ventilating/lighting/equipment by the manufacturer/supplier or the competent authority.
* Use only non-sparking tools.
* Do not breathe dust/fume/gas/mist/vapours/spray.
* Avoid release to the environment.
* Wash hands and exposed body thoroughly after handling.
* Wear protective gloves, glasses and respirator.

First Aid Measures

* IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a doctor/physician.
* IF SWALLOWED: Immediately call a doctor/physician. Rinse mouth. Do NOT induce vomiting.
* IF IN EYES: Rinse cautiously with water for minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF eye irritation persists, get medical advice/attention.
* IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.
* If on skin and skin irritation or rash occurs, get medical advice/attention.
* Wash/Decontaminate removed clothing before reuse.
* Get medical attention/advice if you feel unwell.
* Refer to "5.FIRE-FIGHTING MEASURES" in the 5th paragraph of this MSDS.
* Collect spillage.

Storage

* Store in cool/well-ventilated place.

Disposal

* Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazard information

* It is a flammable liquid and explosive if a steam piles up.
* It may possibly cause intoxication of organic-solvent.
* If the waste clothes are left after wiping the coating material, dregs of coatings and spray dust, it may possibly ignite spontaneously.

3.COMPOSITION INFORMATION

Specific of chemical material :Mixture

Hazards component

Ingredient name	CAS No.	METI		Content Weight %	PRTR	ISHL 57-2
		No.	Class*		Class	No.
Zinc oxide (ZnO)	1314-13-2	1-561	-	1 - 5		188
Titanium dioxide	13463-67-7	1-558	-	5 - 10		191
Xylene	1330-20-7	3-3	PCSA	2.1	I	136

Stoddard solvent	8052-41-3	9-1694	-	20 - 30		551
Ethylbenzene	100-41-4	3-28	PCSA	1.3	I	70
Methanol	67-56-1	2-201	PCSA	0.1 - 1		560
Ethanol	64-17-5	2-202	-	0.1 - 1		61
2-Butanone, oxime	96-29-7	2-546	-	0.1 - 1		

Note: No expression about type of the PRTR law when the content of the chemical or element is less than threshold level according to the PRTR law.

Class*: Classification by Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

4.FIRST-AID MEASURES

EYE CONTACT

* Rinse eyes and eyelids for 15 minutes or more with pure running water immediately.
* Consult a doctor as soon as possible.

SKIN CONTACT

* Remove immediately contaminants with clothes, etc..
* Wash skin thoroughly with fresh water, soap, or skin detergent. Do not use solvents and thinners.
* Receive diagnosis of a doctor, when change is looked at by appearance or when painful.
* Remove immediately all contaminated clothing.

INHALATION

* If inhaled large quantity of a steam, gas and like, move a patient to the fresh air place immediately and keep him warm and quiet. If breathing is irregular or stopped, respire artificially. Care a patient not to vomit. Get medical attention.
* If inhaled a steam, gas and like or feels worse, move a patient to the quiet and fresh air place, and consult a doctor.

INGESTION

* If swallow accidentally, keep a patient in a quiet place and consult a doctor immediately.
* Care a patient not to swallow a vomit.

5.FIRE-FIGHTING MEASURES

Extinguishing media

Carbon dioxide fire extinguisher, Foam fire extinguisher, Powder fire extinguisher, Dry sand

Extinction method

* Wear appropriate protective equipments (heat-resistant clothes and like).
* Remove any inflammable things promptly from the circumference.
* Use the adequate fire extinguisher.
* Fight a fire from the windy side.
* Cool off closed container exposed at high temperature with water mist.
* Do not use water (stream of water from a hose, high pressure water) for fire extinguishing.

6.ACCIDENTAL RELEASE MEASURES

* Wear appropriate protective equipments. (Glove, protective mask, apron and goggles)
* Collect spills in closed container and keep in safe place.
* Ensure to comply with the requirements of the authorities when disposing the contaminated clothes and equipments.
* Clear away all sources of ignition, heat, and inflammable materials immediately.
* Provide a suitable fire extinguisher for a precaution of a fire.
* Collect spills with the appropriate tools which are equipped to prevent sparks caused by impact and static electricity.
* Absorb spills with non combustible materials such as dry sand and soil, and collect in closed containers. For extensive spillage, prevent outflow with land elevation.
* Do not let spills to drains, rivers and sea. Special care must be taken for environmental protection.

7. HANDLING AND STORAGE

Handling

* Handle carefully in a well ventilated place.
* Keep container closed tightly.
* No ignition and no spark. Do not handle a high temperature material in the outskirts.
* Provide earthing leads and an explosion-prevention for electrical equipments and installations.
* Use adequate tools to prevent sparks.
* Wear overall clothes and goggles to protect skin, membrane and eyes.
* After handling product, wash a face and hands carefully, and do not bring contaminated protective equipments into a rest station or canteen.
* Wear appropriate protective clothes and implements, and provide sufficient ventilation when working in a confined place.
* Spontaneous ignition materials, such as used rags, coating dregs, and spray dust, must be soaked in water until disposed.
* Do not handle if allergies were acting up in past years.
* Wear antistatic clothes and shoes.

Storage

* Avoid direct sunlight.
* Store in a well ventilated place.
* Keep away from fire and a heat source.
* Store containers against descent and fall in earthquake etc..

8.EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredient name	Exposure limit	ACGIH(TLV-TWA)
Zinc oxide (ZnO)	-	5(Fume)mg/m3
Titanium dioxide	-	10mg/m3
Xylene	50ppm	100ppm
Stoddard solvent	-	100ppm
Ethylbenzene	20ppm	100ppm
Methanol	200ppm	200ppm
Ethanol	-	1000ppm
2-Butanone, oxime	-	-

Equipment requirement

* Install the equipment of the explosion-prevention type.
* Install the exhaust to avoid pile up of a steam.
* Provide earthing leads to equipments for transportation, loading/unloading, and stirring of a liquid.
* Handling place should be free from high temperature and the source of ignition.
* When working inside, provide a local ventilation to prevent an exposure to harmful circumstance and mist of coating material.
* When working in the confined tank, provide a ventilation to change air sufficiently in the entire tank.

Protection

Respiratory protection

* Wear the gas mask for organic gas

Eye protection

* Wear an eye shield or goggle.

Skin protection

* Wear the appropriate gloves, which are not permeable with the organic solvent or chemicals.
* Wear cloths which do not expose skin directly. Preferably the cloths are not permeable with chemicals.

Others protection

* During working for electrostatic-coating, wear appropriate antistatic shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:Liquid
Odour	:Solvent odour
Boiling Point	:136.2 - 196 deg C
Vapour Pressure	:1333 Pa(32 deg C)
Density	:1.332g/ml - 1.432g/ml
PH (Value)	:Not applicable
Flash Point	:36 deg C
Ignition Point	:288 deg C
Explosion limits (LEL,UEL)	:(lower limit)1.1%,(upper limit)7%

10.STABILITY AND REACTIVITY

Stability

* Stable under normal condition.

Possibility of hazardous reactions

* No dangerous reaction in a normal condition.

Conditions to avoid

* No data available.

Incompatible materials

* Nothing special

Hazardous decomposition products

* Generate low-molecular weight monomers such as CO and NOx.

Other hazardous information

* Nothing special

11. TOXICOLOGICAL INFORMATION

Material elements categorized as "Not classified" or "Classification not possible" by GHS are not described .

Harmful information on substance

Zinc oxide (ZnO)

Acute toxicity

No data available

Reproductive toxicity:Category 2

Specific target organ toxicity, single exposure:Category 1(respiratory organs,systemic toxicity)

Titanium dioxide

Acute toxicity

No data available

Serious eye damage/eye irritation:Category 2B

Xylene

Acute toxicity

LD50(Oral):3500mg/kg

LC50(Inhalation):29.08mg/l（4hours）

Skin corrosion/irritation:Category 2

Serious eye damage/eye irritation:Category 2A

Reproductive toxicity:Category 1B

Specific target organ toxicity, single exposure:Category 1(respiratory organs,liver,central nervous system,kidney)

Specific target organ toxicity, single exposure:Category 3(anesthetic action)

Specific target organ toxicity, repeated exposure:Category 1(respiratory organs,nervous system)

Stoddard solvent

Acute toxicity

No data available

Skin corrosion/irritation:Category 2

Specific target organ toxicity, single exposure:Category 3(anesthetic action,respiratory tract irritation)

Specific target organ toxicity, repeated exposure:Category 2(liver,testis)

Aspiration hazards:Category 1

Ethylbenzene

Acute toxicity

LD50(Oral):3500mg/kg

LC50(Inhalation):17.2mg/l（4hours）

Serious eye damage/eye irritation:Category 2B

Carcinogenicity:Category 2

Reproductive toxicity:Category 1B

Specific target organ toxicity, single exposure:Category 2(central nervous system)

Specific target organ toxicity, single exposure:Category 3(respiratory tract irritation)

Aspiration hazards:Category 1

Methanol

Acute toxicity

LD50(Oral):1400mg/kg

LC50(Inhalation):22500ppm（8hours）

Serious eye damage/eye irritation:Category 2

Reproductive toxicity:Category 1B

Specific target organ toxicity, single exposure:Category 1(central nervous system,optic organ,systemic toxicity)

Specific target organ toxicity, single exposure:Category 3(anesthetic action)

Specific target organ toxicity, repeated exposure:Category 1(central nervous system,optic organ)

Ethanol

Acute toxicity

LC50(Inhalation):20000ppm（10hours）

Serious eye damage/eye irritation:Category 2B

Carcinogenicity:Category 1A

Reproductive toxicity:Category 1A

Specific target organ toxicity, single exposure:Category 3(respiratory tract irritation,anesthetic action)

Specific target organ toxicity, repeated exposure:Category 1(liver)

Specific target organ toxicity, repeated exposure:Category 2(central nervous system)

2-Butanone, oxime

Acute toxicity

LD50(Oral):1440mg/kg

LD50(Dermal):1000mg/kg

Serious eye damage/eye irritation:Category 2A

Skin sensitizers:Category 1

Carcinogenicity:Category 2

Specific target organ toxicity, repeated exposure:Category 1(haematopoietic system,kidney)

Harmful information on the product

The safety test is not done as the product.

12. ECOLOGICAL INFORMATION

* Pay a careful attention to leakage and waste disposal, as it may seriously influence to the environment.
* No data available for the product.

Harmful information on substance

Zinc oxide (ZnO)
Aquatic environmental hazards/Acute:Category 1
Aquatic environmental hazard/Long-term:Category 1

Titanium dioxide
No data available for the composition.

Xylene
Aquatic environmental hazards/Acute:Category 2
Aquatic environmental hazard/Long-term:Category 2

Stoddard solvent
Aquatic environmental hazards/Acute:Category 1
Aquatic environmental hazard/Long-term:Category 1

Ethylbenzene
Aquatic environmental hazards/Acute:Category 1

Methanol
No data available for the composition.

Ethanol
No data available for the composition.

2-Butanone, oxime
Aquatic environmental hazards/Acute:Category 3

13. DISPOSAL CONSIDERATION

* Paint ingredient, incinerated ash and used container should be disposed by recognized companies which are licensed as industrial waste disposal by prefectural governor.
* Do not dispose the sewage to the ground and drains after washed a container, instrument equipment, and like.
* Incineration waste and waste water should be disposed in accordance with the regulations and legislations for Waste Disposal, or entrust such business to the approved licensed parties.
* Paint and wastes should be disposed in small pieces by the open type of incinerator to have absorbed them with diatomite. (The incinerator should be installed the necessary equipments against dioxin)

14. TRANSPORT INFORMATION

Make sure there are no damage, corrode and leak on the product container. Products should be also prevented from falling, loosening or tumbling during transit. Packing, labelling and transport take place according to appropriate regulation.

* UN number: 1263
* UN class: Flammable liquids (class 3)
* Packing group: III
* Marine Pollutant: Yes
* Emergency response guide number: 128

15. REGULATORY INFORMATION

* Fire Service Law: Class 4-2 (Non-water soluble liquid) Dangerous grade division Ⅲ
* Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.: Priority Chemical Substance

Assessment

* Ordinance on Prevention of Hazard Due to Special Chemical Substances, Group-2 Special Organic Solvents (The sum total content of Special organic solvents and Organic solvents exceeds 5%.)
  Ethylbenzene more than 1.0%
* Industrial Safety and Health Law Article 57-2 (ISHL) (Deliver of Document)
* Enforcement Order of the Industrial Safety and Health Law: Annex 1-4 (Inflammable Substances)
* Ordinance on Prevention of Organic Solvent Poisoning（Third-class）
* Ship Safety Act: Flammable liquids (class 3)
* Civil Aeronautics Act: Flammable liquids (class 3)
* Act on Prevention of Marine Pollution and Maritime Disaster
* Offensive Odor Control Law: Special offensive odor substances
  Xylene
* Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof(PRTR law)

16. OTHER INFORMATION

Main Quotation Literature

* Japan Paint Manufacturers Association "Chemical Data Base for SDS (paints)"
* Japan Paint Manufacturers Association "a Guidebook to GHS Label and SDS"
* Raw-material maker "Safety Data Sheet"
* Database of National Institute of Technology and Evaluation (NITE)

Notice to Reader

This Material Safety Data Sheet is offered for your information regarding hazard of product, caution against handling and regulatory information. Please observe following items and ensure health, safety and environment conservation.

* Correspond to rules and regulations in the country/the region used.
* The information in this SDS should be provided to all user /employer including your related companies that handle this product.
* The information in this SDS is based on the present state of our knowledge at the date of issue. However we do not assume any liability whatsoever for the accuracy or completeness of the information contained herein. This SDS may be amended in the newly acquired knowledge.
* The data given here do not signify any warranty with regard to the product's properties.
* Make sure safety by user, if user applies without recognized method by CHUGOKU MARINE PAINTS, LTD.(CMP).
* Please consult CMP before exporting this product outside Japan.