

Safety Data Sheet

【1 Chemical substances and corporate Information

Product name : Volatility rust prevention paper NP-VCI-D(Steel・Impregnated type)
 Company name : Ryoko Chemical Co., Ltd.
 Address : 〒103-0023 4-12-20 Nihonbashi Honcho Chuo-ku, Tokyo
 Section in charge : Lifestyle industry business Div. Life business sales departments
 Telephone number : 03-6861-0056
 Fax number : 03-6861-0035
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 Recommended use of the chemical : Volatility rust prevention paper
 Reference number :
 Date of creation : 2015/4/24
 Revision date : -

【2 Hazard identification

GHS classification

Physicochemical hazards :	Explosive substance	Not applicable
:	Combustibles flammable gas	Not applicable
:	Aerosol	Not applicable
:	Oxidizing Gases	Not applicable
:	High-pressure gas	Not applicable
:	FLAMMABLE LIQUIDS	Not applicable
:	Flammable solid	Classification not possible
:	SELF-REACTIVE SUBSTANCES	Not applicable
:	Pyrophoric liquids	Not applicable
:	PYROPHORIC SOLIDS	Not classified
:	SELF-HEATING SUBSTANCES	Not classified
:	Water reactive combustible chemicals	Not classified
:	OXIDIZING LIQUIDS	Not applicable
:	OXIDIZING SOLIDS	Classification not possible
:	ORGANIC PEROXIDES	Not applicable
:	CORROSIVE TO METALS	Not classified
Health hazard :	ACUTE TOXICITY(Oral)	Category 4
:	ACUTE TOXICITY(Dermal)	Classification not possible
:	ACUTE TOXICITY (Gases)	Not applicable
:	Acute toxicity (inhalation-vapors)	Classification not possible
:	Acute toxicity(inhalation: dust)	Classification not possible
:	Acute toxicity(inhalation: mist)	Classification not possible
:	SKIN CORROSION/IRRITATION	Classification not possible
:	Serious Eye Damage/Eye Irritation	Classification not possible
:	Respiratory sensitization	Classification not possible
:	Skin sensitisation	Classification not possible
:	GERM CELL MUTAGENICITY	Category 2
:	Carcinogenicity	Category 2
:	Reproductive toxicity	Category 2
:	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE	Classifications 2(blood, liver)
:	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE	Classifications 2(respiratory tract)
:	ASPIRATION HAZARD	Classification not possible
Environmental hazards :	Aquatics environment hazards short period term(acute)	Category 2
:	Aquatics environment long hazards terms(chronic)	Category 3
:	HAZARDOUS TO THE OZONE LAYER	Classification not possible

GHS label elements

Pictogram

:



Signal word

:

Caution

Hazard statement

:

Harmful if swallowed

Skin irritation

Serious eye injury

Suspected of causing genetic defects

Suspected of causing cancer

Suspected of damaging fertility or the unborn child

Blood, trauma to the liver fears

Long terms airway injury by, or repeated exposure fears

Toxic to aquatic life

Harmful to aquatic life with long lasting effects

Precautionary statements:

[Safety measures]

Washing hand well after treatments.

Do not eat, drink or smoke when using this product.

Wearing protective gloves, protective clothing, protective glasses, face shield.

Obtain the instructions before use.

Do not handle until all safety precautions have been read and understood

Not inhaling dust/fume/gas/mist/steam/spray.

Avoid release to the environment.

(First Aid Measures) → Issued (4 emergency actions)

(Storage) → Issued (7 handlings and notes on storage)

(disposal) → Issued (13 disposal consideration)

【3 Compositions and information on Ingredients

Purified Product or Mixture : Mixture

Component and information on ingredients

Ingredient	Content(%)	CAS No.	Official reference No.	
			Substances Control Law	Method protects.
Sodium nitrite	2	7632-00-0	(1)-483	Existing
DIETHANOLAMINE	4	111-42-2	(2)-302 (2)-354	Existing
Vapor phase inhibitors	11	Yes	Yes	Yes
Papers	83	-	-	-

【4 Emergency measure

Using suitable extinguishing agents for fire.

INGESTION:

:

Call a doctor if you feel unwell

Rinse mouth.

Skin contact

:

When was attached to skin: washing with large amounts of water and soap

When result in skin irritation,/medical attentions allowance's being receive

Take off contaminated clothing and wash it before reuse.

Eye contact

:

Rinse cautiously with water for several minutes. If wearing contact lenses

remove it and Continue rinsing.

Immediately call a doctor

Concerns of exposure or exposure:

Having physical examinations and allowance of doctors.

Inhalation

:

Remove person to fresh air and keep comfortable for breathing.

Collect spillage.

Notes to First Aid Providers

:

Rescuer is at wearing appropriate protective equipment according to stat

【5 Measures at fire

- Extinguishing Media : In incipient fire, carbon Dioxide, powder chemical, dry sand etc is employed. In large-scale fire, water spray, powder chemical is employed.
- Unusual fire hazards : When this product decomposes, it is possibility to produces harmful gas including nitrogen oxides, so that be careful to not inhale smokes.
- FIRE FIGHTING MEASURES : Fire fighting should be done from the windward side as much as possible. Entry except for interested parties is banned in place area of fire.
For fire in surrounding area move available containers transfer safes places as soon as possible.
To discharges for fire-fighting, do not spill out the products in environment.
- Protection for Fire Fighters : Wear (Respiratory protective equipment, chemical protective clothing, gloves, boots, glasses and mask ect) and avoid direct touch and inhalation by situation
Put out fire from the wind side.

【6 Measures at leaks

- Precaution protections and emergency measures to humans : Prohibit to entry except to concerning person for leaked area where is put rope around area.
Wear (Respiratory protective equipment, chemical protective clothing, gloves, boots, glasses and mask ect) and avoid direct touch and inhalation by situation
Put out fire from the wind side.
- Environmental precautions : Do not spill the products from distributing pipe or channel in environment
If spilled, effluents are retrieved immediately.
- Measures and equipment for containment and cleaning : Collecting the products in empty air-tighten container by vacuum cleaners, broom and ETC
- Prevention of secondary hazard : Warning fire brigade, and convey hazards with hazard leak location and products information.

【7 Treatments and cautions for storage

Handling

- Technical measures : Wear protective equipment including protective gloves and glasses
To set washing equipment for eye and body as emergency situation when is near the product applying place.
- Local exhaust ventilation, systemic ventilation : Apply it under local exhaust, or, overall ventilation equipment.
- Safes handling cautions precaution : Keep away from heat, hot surfaces, sparks, open flames and other ignition source
No smoking. Soaking at(whenever possible) waters.
Keep only in original container.
Wear protective gloves/protective clothing/eye protection/face protection
Washing hand well after treatments.
Obtain the instructions before use.
Do not handle until all safety precautions have been read and understood
Avoid release to the environment.

Storage

- Appropriate storage conditions : Storing accord related laws and standards of local government.
Store locked up.
Avoiding sunlight, and close it tightly with cool and dark place with good ventilation, and so
Avoiding approach, application of heat, impact with flames, sparks, or, hot materials or friction
- Safe container or packaging material : Storage container using original product containers, do not transfer it to another container.

【8 Exposure control and personal protection

- Administrative Level : Not specified
- Occupational exposure limits
Japan Society for Occupational Health(2006 years versions)
: Not specified

ACGIH(2006 years version): TLV-TWA 2mg/m³(DIETHANOLAMINE)

Equipment countermeasures : Set up local exhaust ventilation or the sealing equipment for occur steam
Set up eye and hand washing equipment with safety shower near the app
place. And clearly show them the equipment.

Protective equipment

Respiratory protection : Wear respirators if it is necessary.

Hand Protection : Wear protective impervious gloves(rubber gloves).

EYE PROTECTION : Wear protective glasses(common types spectacles).

Protective clothes of skin: Wear long sleeve work clothing.

【9 Physicals and chemical properties

Appearance

Physical State : Papyraceous

Odor : Slight amine odor

Hydrogen exponent : No data

Melting point : No data

Boiling point : No data

Flash point : No data

Explosive limits

Lower limit : No data

Upper limit : No data

Vapour pressure : No data

Vapor density(waters =1) : No data

Specific gravity : No data

Solubility

Waters : No data

Other Solvent : No data

N-octanol/water partition coef : No data

Ignition point : No data

Decomposition temperature : No data

Other data : No data

【10 Stability and reactivity

Stability : It is possibility for the deterioration and discoloration by sunlight or strong light.

Possibility of hazardous reactic: When decomposed by cotacting strong acids, strong oxidants and reducing agent
it might be produced carbon Dioxide and toxic nitrogen oxides.

Conditions to avoid : Avoiding flames, sparks, or, approach with hot materials.

Incompatible materials : Strong acids, strong base, strongly oxidizing agent, reducing agent.

Hazardou decomposition produ : If combustion and decomposition, it is possibility to occurring carbon
monoxide, carbon dioxide, nitrogen oxides, etc.

【11 Hazard information

Acute toxicity : Below is estimation value of mixture acute toxicity(oral)
Which is classifications 4th.

(Appended Table) acute toxicity(p.o, percutaneou and inhalations)

Ingredient	Content(%)	Acute toxicity (Oral)	Acute toxicity (Dermal)	Acute toxicity (Inhalation: gas)	Acute toxicity (Inhalation: steam)	Acute toxicity (Inhalation: dust, Mist)
Nitrous acid Sodium	2	Classifications 3(77mg/kg)	Classification not possible	Not applicable	Classification not possible	Classification not possible
Di-ethanol Amine	4	(1613mg/kg) outside classifications	(8810.5mg/kg) outside classifications	Classification not possible	Classification not possible	Classification not possible
Papers	83	Not applicable				

SKIN CORROSION/IRRITATION	:	No data
Serious eye damaging/irritating property	:	No data
The respiratory tract/crooping skin feelin	:	No data
GERM CELL MUTAGENICITY	:	Based on sodium nitrites category(2) as classifications 2.
Carcinogenicity	:	Based on classifications of diethanolamine(2) as classifications
Reproductive toxicity	:	Based on classifications of Sodium nitrites category(2) and diethanolamine(2) as classifications 2.
SPECIFIC TARGET ORGAN TOXICITY (Single exposure)	:	based on classifications (1:liver), Sodium nitrites category(1: blood) and Diethanolamine as Classifications 2(blood, liver)
Specific target organ toxicity (repeate exposu	:	Based on classifications of diethanolamine(1: respiratory tract) as classifications 2 (respiratory tract).
ASPIRATION HAZARD	:	No data

【12 Ecological information

Ecotoxicity	:	
Fish toxicity	:	No data
Crustacean	:	No data
Algae	:	No data
Other Organisms	:	No data
Persistence/Degradability	:	No data
Bioaccumulation	:	No data
Mobility In soil	:	No data
		Aquatics environment hazards short period term(acute) is based on classifications of sodium nitrite category(1) and diethanolamine(2) as classifications 2.
		Aquatics environment hazards short period term(acute) is based on classifications of sodium nitrite category(1) and diethanolamine(2) as classifications 3.
HAZARDOUS TO THE OZONE LAYER	:	No data

【13 Disposal consideration

Residual waste	:	Follow the instruction by Federal, States, Provincial and local laws. If the special Industrial waste disposal contractor or local governments make waste, follow the instruction from them.
Pollution containment and packagi	:	If requesting normal disposals for the waste, Notify its risk and hazardus. Containers should be recycling after cleaning, or follow the instruction by local goverments or regulations. Remove the content completely before disposal of the container.

【14 Precautions for transports

International regulations		
International Maritime Dangerous Goods (IMDG) Code	:	Not applicable
ICAO-TI(International Civil Aviation Organization Technical Instruction)/IATA-DGR(IATA)	:	Not applicable
National Regulations		
Land regulatory informatic:	:	Not applicable
Marine regulation	:	Not applicable
Aviation regulation	:	Not applicable
Specific Safety Measures and Conditions		
	:	Avoid Fire and high temperature.
No. rudder emergency measure:	:	Not applicable

【15 Applicable laws and regulations

Chemical Substance Control Enhancement L :	Not applicable
Industrial Safety and Health Law :	Not applicable
Poisonous and Deleterious Substances Control L :	Not applicable
Fire Defense Law :	Not applicable
Substances Control Law :	Not applicable
Foreign Exchange and Foreign Trade Law :	Not applicable

【16 Other information

References :	1) nite(National Institute of Technology and Evaluation)-CHRIP(chemicals comprehensive information provision systems) 2) SDS of offices Anzen 3) SDS of material
Contact for information of MSDS :	Ryoko Chemical Co., Ltd. (1) refers

- * Description bases materials that could be available at current information, and is composed, but accuracy of information, integrity. It is not guaranteed. Also, this information may be revised by new findings, test, etc.
- * Notify is for only normal handling. Other chemical substances are mixed, and be taken in special handling. In case, conducts safety measures that is suitable for application usage with the most recent on lectured.
- * As there may be unknown health hazards for all chemical products, be extreme cares for treatments. Please set safety usage conditions by own as own responsibility.