

Jotapipe AC 1003 21S

In accordance with the Standard for Classification and Labeling of Chemical Substance and Safety Data Sheet,
Article 10 Paragraph 1

Section 1. Chemical product and company identification

- A. Product name** : Jotapipe AC 1003 21S
Label No. : 16420
Product description : Paint.
Product type : Solid.

B. Recommended use of the chemical

Identified uses

Uses in Coatings - Industrial use

- C. Supplier/Manufacturer** : Chokwang Jotun Ltd.
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 Gangseo-gu, Busan
 South Korea
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 SDSJotun@jotun.com
- Emergency telephone number** : H.G.LEE Chokwang Jotun Ltd.
 Tel: +82 51 797 6000

Section 2. Hazards identification

- A. Hazard classification** : SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
 SKIN SENSITISATION - Category 1
 REPRODUCTIVE TOXICITY (Fertility) - Category 2
 LONG-TERM AQUATIC HAZARD - Category 3

B. GHS label elements, including precautionary statements

Symbol :



Signal word : Danger.

Hazard statements : Causes serious eye damage.
 May cause an allergic skin reaction.
 Suspected of damaging fertility.
 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace.

Response : IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

C. **Other hazards which do not result in classification** : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	CAS number	%
phenol, polymer with formaldehyde, glycidyl ether	Bisphenol F - epichlorhydrin resin with Number average Molecular Weight < 700; Phenol, polymer with formaldehyde, oxiranylmethyl ether; Phenolic novolak resin	28064-14-4	2.5-10
bisphenol a	Bisphenol A; Phenol, 4,4'-isopropylidenedi-; Phenol, 4,4'-(1-methylethylidene)bis-; Bisphenol A-Phenol, 4,4'-(1-methylethylidene)bis-; p,p'-Isopropylidenediphenol; 4,4'-isopropylidenediphenol; 4,4'-(1-Methylethylidene)bis[phenol; 2,2-Bis(4-hydroxyphenyl)propane	80-05-7	2.5-10
1h-imidazole, 2-methyl-	1H-Imidazole, 2-methyl-; Imidazole, 2-methyl-	693-98-1	0.1-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

- A. Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- B. Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- C. Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- D. Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- E. Most important symptoms/effects, acute and delayed**
Potential acute health effects

Section 4. First aid measures

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Eyes** : Adverse symptoms may include the following:
pain
watering
redness

F. Indication of immediate medical attention and special treatment needed, if necessary

- Specific treatments** : Not available.
- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

A. Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.

B. Specific hazards arising from the chemical

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

C. Special protective equipment for fire-fighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 6. Accidental release measures

- A. Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- B. Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- C. Methods and material for containment and cleaning up**
- Small spill** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

- A. Precautions for safe handling** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- B. Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

- A. Control parameters**
Occupational exposure limits
None.
- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- B. Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- C. Personal protective equipment**
Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. If dust is generated and ventilation is inadequate, use respirator that will protect against dust/mist. (FFP2 / N95).

Section 8. Exposure controls/personal protection

- Hand protection** : There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The breakthrough time must be greater than the end use time of the product.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Always ensure that gloves are free from defects and that they are stored and used correctly.
The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
Nitrile gloves. or Neoprene gloves. Recommended
For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.
The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Eye protection** : Safety eyewear should be used when there is a likelihood of exposure.
- Skin protection** : Personnel should wear protective clothing. Care should be taken in the selection of protective clothing to ensure that inflammation and irritation of the skin at the neck and wrists through contact with the powder are avoided.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and chemical properties

A. Appearance

Physical state : Solid.

Colour : Various

B. Odour : Odourless.

C. Odour threshold : Not available.

D. pH : Not applicable.

E. Melting/freezing point : Not applicable.

F. Boiling point/boiling range : Not available.

G. Flash point : Not available.

Burning time : Not available.

Burning rate : Not available.

H. Evaporation rate : Not available.

I. Flammability (solid, gas) : Not available.

J. Lower and upper explosive (flammable) limits :

K. Vapour pressure : Highest known value: 0 kPa (0 mm Hg) (at 20°C) (bisphenol a).

L. Solubility : Insoluble in the following materials: cold water and hot water.

M. Vapour density : Not available.

N. Relative density : 1.35 to 1.45 g/cm³

O. Partition coefficient: n-octanol/water : Not available.

P. Auto-ignition temperature : Not applicable.

Section 9. Physical and chemical properties

- Q. Decomposition temperature** : >250°C (>482°F)
SADT : Not available.
R. Viscosity : Kinematic (40°C): >0.205 cm²/s (>20.5 mm²/s)
S. Molecular weight : Not applicable.

Section 10. Stability and reactivity

- A. Chemical stability** : The product is stable.
B. Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
C. Conditions to avoid : No specific data.
D. Incompatible materials : Not applicable.
E. Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

A. Information on likely routes of exposure

- Respiratory** : No known significant effects or critical hazards.
Oral : No known significant effects or critical hazards.
Skin : May cause an allergic skin reaction.
Eyes : Causes serious eye damage.

B. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1h-imidazole, 2-methyl-	LD50 Oral	Mouse	1400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
bisphenol a	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	250 milligrams	-

Sensitisation

Not available.

Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Skin contact : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Eye contact : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : Suspected of damaging fertility.

Chronic toxicity

Section 11. Toxicological information

Not available.

Carcinogenicity

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
bisphenol a	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

C. ATE value

Not available.

Section 12. Ecological information

A. Aquatic and terrestrial toxicity

Ecotoxicity : This material is harmful to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
phenol, polymer with formaldehyde, glycidyl ether	Acute EC50 3.3 mg/l	Daphnia	48 hours
bisphenol a	Acute LC50 7.5 mg/l	Fish	96 hours
	Acute EC50 1000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 1.506 mg/l	Algae - Prorocentrum minimum - Exponential growth phase	72 hours
	Acute EC50 7.75 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.34 mg/l Marine water	Crustaceans - Americamysis bahia - Larvae	48 hours
	Acute LC50 3.5 mg/l Marine water	Fish - Rivulus marmoratus - Embryo	96 hours
	Chronic NOEC 2 mg/l Fresh water	Algae - Chlorolobion braunii - Exponential growth phase	4 days
	Chronic NOEC 0.05 mg/l Fresh water	Crustaceans - Asellus aquaticus - Juvenile (Fledgling, Hatchling, Weanling)	21 days
	Chronic NOEC 30 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.2 µg/l Fresh water	Fish - Carassius auratus - Adult	90 days
1h-imidazole, 2-methyl-	Acute LC50 286000 to 307000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

B. Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
phenol, polymer with formaldehyde, glycidyl ether	-	-	Not readily

C. Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
bisphenol a	3.4	20 to 67	low
1h-imidazole, 2-methyl-	0.24	-	low

D. Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

E. Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

A. Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

B. Disposal precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

This preparation is not classified as dangerous according to international transport regulations (ADR/RID, IMDG or ICAO/IATA).

Section 15. Regulatory information

A. Regulation according to ISHA

Article 2 of Youth Protection Act on Substances Hazardous to Youth : Not applicable.

ISHA article 37 (Harmful substances prohibited from manufacture) : None of the components are listed.

ISHA article 38 (Harmful substances requiring permission) : None of the components are listed.

ISHA Article 39 :

Exposure Limits of Chemical Substances and Physical Factors

None of the components have an OEL.

ISHA Enforcement Regs Annex 11-3 (Exposure standards established for harmful factors) : None of the components are listed.

ISHA Enforcement Regs Annex 11-4 (Harmful factors subject to Work Environment Measurement) : None of the components are listed.

Section 15. Regulatory information

ISHA Enforcement Regs Annex 12-2 (Harmful Factors Subject to Special Health Check-up) : None of the components are listed.

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) : None of the components are listed.

B. Regulation according to AREC & CCA

AREC Toxic chemicals : Not applicable

AREC Article 32 (Banned) : None of the components are listed.

AREC Article 32 (Restricted) : None of the components are listed.

AREC Article 17 (TRI) Korea inventory : The following components are listed: Barium and its compounds; 4,4'-Bisphenol A : Not determined.

CSCA Article 39 (Accident Precaution Chemicals) : None of the components are listed.

C. Dangerous Materials Safety Management Act : Not available.

D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations.

E. Regulation according to other foreign laws

Europe inventory : Not determined.

United States inventory (TSCA 8b) : Not determined.

Japan inventory : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

A. References : Not available.

B. Date of issue/Date of revision : 15.01.2018

C. Version : 1
Date of printing : 15.01.2018

D. Other

✔ Indicates information that has changed from previously issued version.

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.