SAFETY DATA SHEET

PSX 700 RAL 7038 GRAY RESIN



Date of issue 25 August 2025

Version 3

1. Product and company identification

Product name : PSX 700 RAL 7038 GRAY RESIN

Product code : 00349196 Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Professional applications, Used by spraying.

Use of the substance/

mixture

: Coating.

Uses advised against : Not applicable.

Supplier's details : PPG PMC Japan Co., Ltd., 8F, Shintetsu Bldg., 1-1, Daikaidori 1-chome, Kobe

652-0803 Japan; Tel: +81-78-574-2777

Emergency telephone

number

: 078 574 2777

2. Hazards identification

GHS Classification : SKIN SENSITIZATION - Category 1

CARCINOGENICITY - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD - Category 3

HAZARDOUS TO THE AQUATIC ENVIRONMENT - CHRONIC HAZARD -

Category 3

GHS label elements

Hazard pictograms





Signal word : Danger

Hazard statements: May cause an allergic skin reaction.

May cause cancer.

Causes damage to organs through prolonged or repeated exposure. (respiratory

organs)

Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Japan Page: 1/13

Product code 00349196

Date of issue 25 August 2025

Version 3

Product name PSX 700 RAL 7038 GRAY RESIN

2. Hazards identification

Response

: F exposed or concerned: Get medical advice or attention. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

Storage

: Store locked up.

Disposal

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

Other hazards which do not: None known.

result in classification

3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

CAS number : Not applicable. **CSCL** number : Not available.

Ingredient name	%	CAS number	CSCL
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25 - <50	30583-72-3	7-1282
Titanium dioxide (excluding nanoparticle)	20 - <25	13463-67-7	1-558; 5-5225
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	1 - <2	41556-26-7	5-5501
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	0.2 - < 0.5	82919-37-7	5-5593
Silica (silicon dioxide containing crystalline and amorphous)	0.2 - <0.5	7631-86-9	1-548
carbon black	0.1 - < 0.2	1333-86-4	5-3328; 5-5222
Zirconium oxide	0.1 - < 0.2	1314-23-4	1-563
Methanol	0.1 - < 0.2	67-56-1	2-201

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.

SUB codes represent substances without registered CAS Numbers.

4. First aid measures

Description of necessary first aid measures

Eye contact

: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation

Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact

: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and

Ingestion

water or use recognized skin cleanser. Do NOT use solvents or thinners. If swallowed, seek medical advice immediately and show this container or label.

Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards. Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Japan Page: 2/13 Product code 00349196 Date of issue 25 August 2025 Version 3

Product name PSX 700 RAL 7038 GRAY RESIN

4. First aid measures

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion: No specific data.

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

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: No specific treatment.

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.

: Use an extinguishing agent suitable for the surrounding fire.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

ng : None known.

Unsuitable extinguishing media

Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:

carbon oxides nitrogen oxides

halogenated compounds metal oxide/oxides

Special protective actions 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

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Japan Page: 3/13

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled 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.

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage: Do not store above the following temperature: 50°C (122°F). 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

> Japan Page: 4/13

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ittanium dioxide	Japan Society for Occupational Health (Japan, 5/2024) [titanium dioxide] OEL-M 8 hours: 1.5 mg/m³ (as Ti). Form: Respirable particulate matter. OEL-M 8 hours: 2 mg/m³ (as Ti). Form: Total particulate matter. Japan Society for Occupational Health (Japan, 5/2024) [titanium dioxide (nanoparticle)] OEL-M 8 hours: 0.3 mg/m³. Form:
carbon black	nanoparticle. Technical Guideline Concerning the Applications, etc. of Concentration Standard for Preventing Health Hazards (Japan, 6/2024) TWA 8 hours: 0.3 mg/m³. Form: as
methanol	respirable aerosol fraction. Japan Society for Occupational Health (Japan, 5/2024) Absorbed through skin. OEL-M 8 hours: 200 ppm. OEL-M 8 hours: 260 mg/m³. Industrial Safety and Health Act (Japan, 11/2024) TWA 8 hours: 200 ppm.

procedures

Recommended monitoring: 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.

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor 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.

Individual protection measures

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.

Eye protection Skin protection

: Safety glasses with side shields.

Japan Page: 5/13 Product code 00349196

8. Exposure controls/personal protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer. check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves

: butyl rubber

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

9. Physical and chemical properties

Appearance

Physical state : Liquid. Color : Gray.

Odor : Characteristic. **Boiling point** : >37.78°C (>100°F)

Flash point : Closed cup: 97.22°C (207°F)

Evaporation rate : 0.7 (butyl acetate = 1) : 1.6 kPa (12 mm Hg) Vapor pressure

Relative density : 1.38

Media Result Solubility(ies)

cold water Not soluble

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions:

oxidizing agents, strong alkalis, strong acids.

Japan Page: 6/13

10. Stability and reactivity

Hazardous decomposition products

: Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides halogenated compounds metal oxide/oxides

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Intanium dioxide (excluding nanoparticle)	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
bis(1,2,2,6,6-pentamethyl- 4-piperidyl) sebacate	LD50 Oral	Rat	3.125 g/kg	-
methyl 1,2,2,6,6-pentamethyl- 4-piperidyl sebacate	LD50 Oral	Rat	3.125 g/kg	-
Silica (silicon dioxide containing crystalline and amorphous)	LD50 Dermal	Rabbit	>5000 mg/kg	-
,	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
carbon black	LD50 Oral	Rat	>10 g/kg	-
Methanol	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rabbit Rat	64000 ppm 15800 mg/kg 5600 mg/kg	4 hours - -

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Silica (silicon dioxide containing crystalline and amorphous)	Category 3	-	Respiratory tract irritation
Methanol	Category 1	-	central nervous system (CNS), systemic toxicity, visual organ
-	Category 3	-	Narcotic effects

Japan Page: 7/13

Date of issue 25 August 2025 Version 3

Product name PSX 700 RAL 7038 GRAY RESIN

11. Toxicological information

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
	Category 1	-	respiratory organs
Silica (silicon dioxide containing crystalline and amorphous)	Category 1	-	immune system, kidneys, respiratory organs
carbon black	Category 1	-	respiratory organs
Methanol	Category 1	-	central nervous system (CNS), visual organ

Aspiration hazard

Product code 00349196

Not available.

Information on the likely

: Not available.

routes of exposure

Potential acute health effects

Eye contactInhalationNo known significant effects or critical hazards.No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects: Not available.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure. Once

sensitized, a severe allergic reaction may occur when subsequently exposed to very

low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Japan Page: 8/13

Date of issue 25 August 2025 Version 3

Product name PSX 700 RAL 7038 GRAY RESIN

11. Toxicological information

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	(gases)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
PSX 700 RAL 7038 GRAY RESIN bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	55470.1 3125 3125	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A
Methanol	500	15800	64000	N/A	N/A

Other information

Product code 00349196

rimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness.

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	LC50 11.5 mg/l	Fish	96 hours
Titanium dioxide (excluding nanoparticle)	Acute LC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
Silica (silicon dioxide containing crystalline and amorphous)	Acute EC50 2.2 g/L Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
1 /	Acute LC50 >10000 mg/l Chronic NOEC 12.5 mg/l Fresh water	Fish Daphnia - <i>Daphnia magna</i> - Neonate	96 hours 21 days
Methanol	Acute LC50 13 mg/l Fresh water	Fish	96 hours

Persistence/degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Methanol	-0.77	-	Low

Mobility in soil

Soil/Water partition

coefficient

: Not available.

Mobility : Not available.

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

Japan Page: 9/13

13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized 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. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

UN : None identified. : None identified. **IMDG** : None identified. IATA

Special precautions for user : 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.

Transport in bulk according: Not applicable.

15. Regulatory information

to IMO instruments

Fire Service Law

Category	Substance name/Type	Danger category	Signal word	Designated quantity
Category IV	Class III petroleums	III	Flammable - Keep Fire Away	2000 L

Pollutant Release and Transfer Registers (PRTR)

None of the components are listed.

Japan Page: 10/13

15. Regulatory information

Industrial Safety and Health Act

Ordinance on the Prevention of the Hazard due to Specified Chemical Substances

None of the components are listed.

Substance(s) requiring labelling

Ingredient name	%	Status	Reference number
√tanium(IV) oxide	≥20 - ≤30	Listed	191, 2-623 (2025-04)
Crystalline silica	≤10	Listed	165-2
Silica, crystalline(2025-04)	≤10	Listed	2-578 (2025-04)

Chemicals requiring notification

Ingredient name	%	Status	Reference number
☐tanium(IV) oxide ☐	≥20 - ≤30	Listed	191, 2-623 (2025-04)
Crystalline silica	≤10	Listed	165-2
Silica, crystalline(2025-04)	≤10	Listed	2-578 (2025-04)
Carbon black	≤10	Listed	130, 2-403 (2025-04)
Methanol	≤10	Listed	560, 2-2006 (2025-04)

Carcinogens based on Article 577-2 of the Ordinance on ISH

Ingredient name	%		Reference number
silicon dioxide	≤10	Listed	-

Mutagen

None of the components are listed.

Corrosive liquid Occupational Safety and

Health Law

Regulations on the

Prevention of Tetraalkyl

Lead Poisoning

Harmful Substances

Subject to Obtaining

Permission for Manufacturing

Harmful Substances,

Prohibited for

Manufacturing

ISHL Enforcement Order

Substances

Appendix 1 - Dangerous

: Not listed **Lead regulation**

: Not listed

: Combustible

: Not listed

: Not listed

: Not listed

: Combustible

Japan

Page: 11/13

Product code 00349196 Date of issue 25 August 2025 **Version 3**

Product name PSX 700 RAL 7038 GRAY RESIN

15. Regulatory information

Organic solvents poisoning prevention : Not applicable.

Poisonous and Deleterious Substances

None of the components are listed.

Chemical Substances Control Law (CSCL)

Ingredient name	%	Status	Reference number
2,2,4,4,6,6,8,8-Octamethyl-	≤10	Monitoring	40
1,3,5,7,2,4,6,8-tetraoxatetrasilocane			
Xylene	≤10	Priority assessment	125
2,2,4,4,6,6,8,8,10,10,12,12-Dodecamethyl-	≤10	Monitoring	41
1,3,5,7,9,11-hexaoxa-2,4,6,8,10,12-hexasilacyclododeca	ane		
Ethylbenzene	≤10	Priority assessment	50
1,4-Dioxane	≤10	Priority assessment	80
Acetaldehyde	≤10	Priority assessment	26
Ethylene oxide	≤10	Priority assessment	19

High Pressure Gas Control: Not available.

Law

Explosives Control Law

None of the components are listed.

Law concerning prevention : Not available. of pollution of the ocean

Maritime Safety Law

Notification Regulating Transportation of Dangerous Materials by Sea

None of the components are listed.

Container class

None of the components are listed.

: Group 2B **JSOH Carcinogen List of Specially Controlled**

Industrial Waste

: Not listed

Japan inventory : All components are listed or exempted.

Road law : Not available.

16. Other information

History

Date of issue/Date of : 25 August 2025

revision

Date of previous issue : 2/17/2020

Version : 3 **Prepared by** : EHS

Page: 12/13 **Japan**

Product code 00349196 Date of issue 25 August 2025 Version 3

Product name PSX 700 RAL 7038 GRAY RESIN

16. Other information

Key to abbreviations

: ADN = European Provisions concerning the International Carriage of Dangerous

Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

RID = The Regulations concerning the International Carriage of Dangerous Goods

by Rail

UN = United Nations

▼ Indicates information that has changed from previously issued version.

Notice to reader

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Japan Page: 13/13