

Multicolor Colorant GO, GE, GI, GS, GV, HT, OK, RB, RE, RY, SS, ST, SV

Section 1. Identification

GHS product identifier : Multicolor Colorant GO, GE, GI, GS, GV, HT, OK, RB, RE, RY, SS, ST, SV

Other means of identification

: Not available.

Product code 2820

Product description : Colouring material.

Raw material Code

Product type : Liquid.

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

Identified uses

Use in coatings - Industrial use

Supplier's details Jotun (Singapore) Pte Ltd

> 37 Tuas View Crescent Singapore 637236 Phone: 6508 8288 Fax: 6265 7484 SDSJotun@jotun.com

Emergency telephone

number

: Jotun (Singapore) Pte Ltd, Tel: 6508 8288

Section 2. Hazards identification

Classification of the substance or mixture **GHS label elements**

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

Hazard pictograms





Signal word : Danger.

Hazard statements : Causes serious eye damage.

Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear eye or face protection. Avoid release to the environment.

: Collect spillage. IF IN EYES: Rinse cautiously with water for several minutes. Response

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately

call a POISON CENTER or physician.

Storage : Not applicable.

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

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Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of : Not available.

identification

CAS number/other identifiers

CAS number : Not applicable.

EC number : Mixture.

Product code : 2820

Ingredient name	%	CAS number
Alcohols, C16-18 and C18-unsatd., ethoxylated poly(oxy-1,2-ethanediyl), .alphasulfoomegahydroxy-, c10-16-alkyl ethers, sodium salts	≤5 ≤4.8	68920-66-1 68585-34-2
propylidynetrimethanol bronopol 2-octyl-2h-isothiazol-3-one (OIT) C(M)IT/MIT (3:1)	≤1 ≤0.1 <0.05 <0.003	77-99-6 52-51-7 26530-20-1 55965-84-9

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.

Chemical formula : Not applicable.

Section 4. First aid measures

Description of necessary first aid measures

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.

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. 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.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

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Section 4. First aid measures

Inhalation : No known significant effects or critical hazards. **Skin contact** : No known significant effects or critical hazards. Ingestion No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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

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

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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

Specific hazards arising from the chemical

> contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water

Hazardous thermal decomposition products : Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides sulfur oxides

halogenated compounds

carbonyl halides 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 training.

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

Section 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 spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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Section 6. Accidental release measures

For emergency responders: If specialised 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 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. Collect spillage.

Methods and material 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 the 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 spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour 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.

Advice on general occupational hygiene

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.

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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

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.

Individual protection measures

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Section 8. Exposure controls/personal protection

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying to EN 166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin 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.

Wear suitable gloves tested to EN374.

May be used, gloves(breakthrough time) 4 - 8 hours: 4H, polyvinyl alcohol (PVA) Recommended, gloves(breakthrough time) > 8 hours: neoprene, fluor rubber, Viton®, nitrile rubber, butyl rubber

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.

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

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Various colours.

Odour : Faint odour.

Odour threshold : Not available.

pH : Not available.

Melting point : (

Boiling point : Lowest known value: 100°C (212°F) (water). Weighted average: 123.14°C (253.7°F)

Flash point : Closed cup: 117°C (242.6°F)

Burning time : Not applicable.
Burning rate : Not applicable.

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Section 9. Physical and chemical properties

Evaporation rate : Highest known value: 0.36 (water) Weighted average: 0.27compared with butyl

acetate

Flammability (solid, gas)
Lower and upper explosive

(flammable) limits

: 2.6 - 12.6%

: Not applicable.

Vapour pressure

: Highest known value: 3.2 kPa (23.8 mm Hg) (at 20°C) (water). Weighted average:

2.37 kPa (17.78 mm Hg) (at 20°C)

Vapour density : Highest known value: 2.6 (Air = 1) (propylene glycol).

Relative density : 1.14 to 2.03 g/cm³

Solubility : Easily soluble in the following materials: cold water and hot water.

Solubility in water : Not available.

Partition coefficient: n- : Not available.

octanol/water

vater

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Dynamic: Highest known value: 43.43 cP (propylene glycol)

Kinematic (40C): >20.5 cSt

Section 10. Stability and reactivity

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

: Lowest known value: 371°C (699.8°F) (propylene glycol).

Chemical stability: The product is stable.

Possibility of hazardous reactions

Incompatible materials

Auto-ignition temperature

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

Conditions to avoid

No specific data.Keep away from the following materials to prevent strong exothermic reactions:

oxidising agents, strong alkalis, strong acids.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

SADT : Not available.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propylidynetrimethanol	LD50 Oral	Rat	14000 mg/kg	-
2-octyl-2h-isothiazol-3-one (OIT)	LD50 Dermal	Rabbit	690 mg/kg	-
	LD50 Dermal	Rabbit	690 mg/kg	-
	LD50 Oral	Rat	550 mg/kg	-
C(M)IT/MIT (3:1)	LD50 Oral	Rat	53 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Alcohols, C16-18 and C18-unsatd., ethoxylated	Skin - Mild irritant	Mammal - species unspecified	-	-	-
poly(oxy-1,2-ethanediyl), . alphasulfoomega hydroxy-, c10-16-alkyl ethers, sodium salts	Eyes - Irritant	Mammal - species unspecified	-	-	-
,	Skin - Mild irritant	Mammal - species unspecified	-	-	-
bronopol	Skin - Moderate irritant Skin - Mild irritant	Human Rabbit	-	10 milligrams 24 hours 500 milligrams	

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Section 11. Toxicological information

Skin - Moderate irritant	Rabbit	-	80 milligrams	-
Eyes - Irritant	Mammal -	-	-	-
	species			
	unspecified			
Skin - Mild irritant	Mammal -	-	-	-
	species			
	unspecified			

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
2-octyl-2h-isothiazol-3-one (OIT)	skin	Mammal - species unspecified	Sensitising
C(M)IT/MIT (3:1)	skin	Mammal - species unspecified	Sensitising

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
bronopol	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes : Not available.

of exposure

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards. **Skin contact** : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards. Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

> watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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

Short term exposure

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Section 11. Toxicological information

Potential immediate

Potential delayed effects

effects

Long term exposure

Potential immediate

: Not available.

: Not available.

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : 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** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Alcohols, C16-18 and C18-unsatd., ethoxylated	Acute LC50 1.3 mg/l	Fish	96 hours
poly(oxy-1,2-ethanediyl), . alphasulfoomega hydroxy-, c10-16-alkyl ethers, sodium salts	Acute EC50 3.43 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
bronopol	Acute EC50 0.18 ppm Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 1.6 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 11.17 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 1.94 ppm	Fish - Oncorhynchus mykiss	49 days
2-octyl-2h-isothiazol-3-one (OIT)	Acute EC50 0.084 mg/l	Algae - Scenedesmus subspicatus	72 hours
	Acute EC50 0.32 mg/l	Daphnia	48 hours
	Acute LC50 0.047 mg/l	Fish	96 hours
C(M)IT/MIT (3:1)	Acute EC50 0.027 mg/l	Algae - Selenastrum capricornutum	72 hours
	Acute EC50 0.16 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.19 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.1 mg/l	Daphnia	21 days
	Chronic NOEC 0.05 mg/l	Fish	14 days

Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
C(M)IT/MIT (3:1)	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Alcohols, C16-18 and C18-unsatd., ethoxylated	4.2	-	high
propylidynetrimethanol	-0.47	<1	low
bronopol	0.18	-	low
2-octyl-2h-isothiazol-3-one (OIT)	2.45	-	low

Mobility in soil

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Section 12. Ecological information

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

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 nonrecyclable 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN3082	UN3082	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (2-octyl-2h-isothiazol-3-one (OIT))	Environmentally hazardous substance, liquid, n.o.s. (2-octyl-2h-isothiazol-3-one (OIT)). Marine pollutant (Alcohols, C16-18 and C18-unsatd., ethoxylated)	Environmentally hazardous substance, liquid, n.o.s. (2-octyl-2h-isothiazol-3-one (OIT))
Transport hazard class(es)	9	9	9
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.
Additional information	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. Emergency schedules F-A, S-F	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Additional information

Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

ADR / RID

Tunnel restriction code: (-) Hazard identification number: 90

IMDG

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

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.

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Section 14. Transport information

Transport in bulk according : Not available. to Annex II of Marpol and

the IBC Code

Section 15. Regulatory information

Singapore - hazardous chemicals under government control

None.

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

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)

UN = United Nations

References

: Not available.

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.

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