

**SAFETY DATA SHEET**

Revision Date: 06/30/2020

Print Date: 11/30/2020

SDS Number: R0718381

Version: 1.5

Gafquat™ HS-100 polymer  
™ Trademark, Ashland or its subsidiaries, registered  
in various countries  
838786

29 CFR 1910.1200 (OSHA HazCom 2012)

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION****Product identifier**

Trade name : Gafquat™ HS-100  
polymer  
™ Trademark, Ashland or its subsidiaries, registered in  
various countries

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

Recommended use : Personal care

**Details of the supplier of the safety data sheet**

Ashland  
P.O. Box 2219  
Columbus, OH 43216  
United States of America (USA)  
1-614-790-3333

EHSProductSafety@ashland.com

**Emergency telephone number**

1-800-ASHLAND (1-800-274-5263)

**Regulatory information**

1-614-790-3333 (customer service)

**Product Information**

1-614-790-3333

**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Skin irritation : Category 2

**GHS label elements**

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Causes skin irritation.

Precautionary Statements : **Prevention:**  
Wash skin thoroughly after handling.

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Wear protective gloves.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous components**

Chemical name	CAS-No.	Classification	Concentration (%)
2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride	131954-48-8	Skin Irrit. 2; H315	21.00

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.  
If on skin, rinse well with water.  
Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.
- If swallowed : Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.



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If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or Section 11. Causes skin irritation.

Notes to physician : No hazards which require special first aid measures.

## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
 Water spray  
 Foam  
 Carbon dioxide (CO<sub>2</sub>)  
 Dry chemical

Unsuitable extinguishing media : High volume water jet

Hazardous combustion products : Carbon dioxide (CO<sub>2</sub>)  
 Carbon monoxide  
 Nitrogen oxides (NO<sub>x</sub>)  
 Hydrogen chloride

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
 Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

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Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Do not breathe vapours/dust.  
Do not smoke.  
Container hazardous when empty.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Further information on storage stability : No decomposition if stored and applied as directed.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Hazardous components without workplace control parameters**

Components	CAS-No.
2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride	131954-48-8

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

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### Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter within the capabilities of the respirator/filter combination.  
Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator.

### Hand protection

Material : butyl-rubber  
Break through time : 480 min  
Glove thickness : > 0.5 mm

Remarks : The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.  
The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:  
Impervious clothing  
Safety shoes  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Discard gloves that show tears, pinholes, or signs of wear.  
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.  
When using do not eat or drink.  
When using do not smoke.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : viscous  
liquid

Physical state : liquid

Colour : light pink, light yellow



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Odour : odourless

Odour Threshold : Not applicable

pH : 7 - 8

Melting point/freezing point : not determined

Boiling point/boiling range : not determined

Flash point : Not applicable

Evaporation rate : not determined

Flammability (liquids) : not determined

Upper explosion limit : Upper explosion limit  
not determined

Lower explosion limit : Lower explosion limit  
not determined

Vapour pressure : not determined

Relative vapour density : not determined

Relative density : No data available

Density : 1.042 g/cm<sup>3</sup>

Solubility(ies)

Water solubility : soluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : not determined

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : not determined

Viscosity, kinematic : not determined

Oxidizing properties : Not applicable

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.
Incompatible materials	: Strong oxidizing agents strong reducing agents
Hazardous decomposition products	No hazardous decomposition products are known.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure	: Inhalation Skin contact Eye Contact Ingestion
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**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : LD50 (Rat): &gt; 5,000 mg/kg

**Components:**

2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride:

Acute oral toxicity : LD50 (Rat): &gt; 5,000 mg/kg

**Skin corrosion/irritation**

Causes skin irritation.

**Product:**

Species: Rabbit

Result: Irritating to skin.

Remarks: May cause skin irritation and/or dermatitis.

**Components:**

2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride:



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Result: Irritating to skin.

### Serious eye damage/eye irritation

Not classified based on available information.

#### Product:

Species: Rabbit

Result: Slight, transient irritation

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

### Components:

2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride:

Result: Slight, transient irritation

### Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

#### Components:

2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Result: In vivo tests did not show any chromosomal changes.

### Carcinogenicity

Not classified based on available information.

### Reproductive toxicity

Not classified based on available information.

### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Not classified based on available information.

### Aspiration toxicity

Not classified based on available information.

#### Product:

No aspiration toxicity classification

### Further information

#### Product:

Remarks: No data available

### Carcinogenicity:

IARC

No component of this product present at levels greater than or



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equal to 0.1% is identified as probable, possible or confirmed  
human carcinogen by IARC.

**OSHA**

No component of this product present at levels greater than or  
equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**

No component of this product present at levels greater than or  
equal to 0.1% is identified as a known or anticipated carcinogen  
by NTP.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

**Components:**

2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 23.81 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 501.22 mg/l  
Exposure time: 48 h

**Persistence and degradability****Components:**

2-Pyrrolidinone, 1-ethenyl-, polymer with N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-1-propanaminium chloride:

Biodegradability : Remarks: Not readily biodegradable.  
Based on a similar product formulation.

No data available

**Bioaccumulative potential****Components:**

No data available

**Mobility in soil****Components:**

No data available



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### Other adverse effects

No data available

### Product:

Additional ecological : No data available  
 information

### Components:

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

General advice

: Do not dispose of waste into sewer.  
 Do not contaminate ponds, waterways or ditches with  
 chemical or used container.  
 Send to a licensed waste management company.  
  
 Dispose of in accordance with all applicable local, state and  
 federal regulations.

Contaminated packaging

: Empty remaining contents.  
 Dispose of as unused product.  
 Empty containers should be taken to an approved waste  
 handling site for recycling or disposal.  
 Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

### International transport regulations

#### REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

### U.S. DOT - ROAD

Not dangerous goods

### CFR RAIL C

Not dangerous goods

### U.S. DOT - INLAND WATERWAYS

Not dangerous goods

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**TDG\_ROAD\_C**

Not dangerous goods

**TDG\_RAIL\_C**

Not dangerous goods

**TDG\_INWT\_C**

Not dangerous goods

**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods

**MX\_DG**

Not dangerous goods

**\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know Act  
CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

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**SARA 311/312 Hazards** : Skin corrosion or irritation

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**SARA 313** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US State Regulations****Pennsylvania Right To Know**

WATER

7732-18-5

2-Pyrrolidinone,1-ethenyl-,polymer with  
 N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-  
 propenyl)amino]-1-propanaminium chloride

131954-48-8

**New Jersey Right To Know**

WATER

7732-18-5

2-Pyrrolidinone,1-ethenyl-,polymer with  
 N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-  
 propenyl)amino]-1-propanaminium chloride

131954-48-8

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**The components of this product are reported in the following inventories:**

**TSCA** : This product is regulated under the United States Food and Drug Act (FDA).

**DSL** : q (quantity restricted)

**AICS** : On the inventory, or in compliance with the inventory

**ENCS** : Personal care

**KECI** : Personal care

**PICCS** : Not in compliance with the inventory

**IECSC** : On the inventory, or in compliance with the inventory

**TCSI** : On the inventory, or in compliance with the inventory



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### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)  
 - On or in compliance with the active portion of the TSCA inventory

## SECTION 16. OTHER INFORMATION

### Further information

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard</p>	<table border="1"> <tr> <td><b>HEALTH</b></td><td><b>2/</b></td></tr> <tr> <td><b>FLAMMABILITY</b></td><td><b>0</b></td></tr> <tr> <td><b>PHYSICAL HAZARD</b></td><td><b>0</b></td></tr> </table> <p>0 = not significant, 1 = Slight,            2 = Moderate, 3 = High            4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>2/</b>	<b>FLAMMABILITY</b>	<b>0</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>2/</b>						
<b>FLAMMABILITY</b>	<b>0</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

### NFPA Flammable and Combustible Liquids Classification

Not applicable

### Full text of H-Statements

H315 Causes skin irritation.

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the

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information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative