



SAFETY DATA SHEET

RED ARROW CHAROSL SELECT 24 P 55GL

Section 1. Identification

GHS product identifier : *RED ARROW CHAROSL SELECT 24 P 55GL*
Product code : 20629237
Chemical name : Smoke Flavouring
Other means of identification : Smoke Flavouring
Product type : Liquid

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

Identified uses

Flavouring agents, solvents/carriers and/or additives for foodstuffs. For additional information, see technical data sheet.

Uses advised against

Not applicable.

Supplier's details

:
 Kerry Inc.
 3400 Millington Road
 Beloit, WI, 53511
 USA
 +1. 608.363.1200

Emergency telephone number : CHEMTREC: +1-703-527-3887
(with hours of operation) : 24 Hours, Collect Calls Accepted

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN CORROSION - Category 1A
 SERIOUS EYE DAMAGE - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 20 % (oral) 20 % (dermal) 20 % (inhalation)

GHS label elements

Hazard pictograms

:

**Signal word**

:

Danger

Hazard statements

:

Causes severe skin burns and eye damage.

Precautionary statements**Prevention**

:

Wear protective gloves, protective clothing and eye or face protection.
Wash thoroughly after handling.

Response

:

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. 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 doctor.

Storage

:

Store locked up.

Disposal

:

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

Hazards not otherwise classified

:

None known.

Section 3. Composition/information on ingredients

Substance/mixture

:

Mixture

Chemical name

:

Smoke Flavouring

Other means of identification

:

Smoke Flavouring

Ingredient name	%	CAS number
Pyroligneous acids, hickory	>= 25 - <= 50	74113-74-9
Acetic acid	>= 5 - <= 10	64-19-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Formaldehyde is not directly added to this product. However, depending on the conditions of application of this product, such as open system applications of showering, drenching or spraying, formaldehyde may be released. It is the user's responsibility to determine what levels may be released during open system applications, including showering, drenching or spraying.

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

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

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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. |
| 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. 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. |
| Inhalation | : | No known significant effects or critical hazards. |
| Skin contact | : | Causes severe burns. |
| 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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- 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. Fire-fighting 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** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: carbon dioxide, carbon monoxide
- 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 mode.

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 spilled material. Do not breathe 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

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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).

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.

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 vapor or mist. Do not ingest. 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 unlabeled 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

Ingredient name	Exposure limits
Pyrolytic acids, hickory	None.
Acetic acid	OSHA PEL 1989 (1989-03-01). TWA 25 mg/m ³ 10 ppm OSHA PEL (1993-06-30). TWA 25 mg/m ³ 10 ppm NIOSH REL (1994-06-01). TWA 25 mg/m ³ 10 ppm STEL 37 mg/m ³ 15 ppm ACGIH TLV (1994-09-01). TWA 25 mg/m ³ 10 ppm STEL 37 mg/m ³ 15 ppm

- 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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard 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** : 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.
- 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 and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid [Clear]
- Color** : Brown
- Odor** : Smoke/Grill
- Odor threshold** : Not available.
- pH** : 3
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : 93.33 °C (199.99 °F)
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : **Lower:** Not available.
Upper: Not available.
- Vapor pressure** : Not available.

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Relative vapor density : Not available.
Relative density : 1.139

Solubility : Not available.
Solubility in water : Not available.
Partition coefficient: n-octanol/water : Not applicable.
Auto-ignition temperature :

Ingredient name	Auto-ignition temperature
acetic acid	463 °C (865 °F)

Decomposition temperature : Not available.
Viscosity : **Dynamic** : Not available.
Kinematic : Not available.
Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not applicable.

Section 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 : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetic acid				
	LD50 Oral	Rat	3,310 mg/kg	-
	LC50 Inhalation Vapor	Rat	11 mg/l	4 h
	LD50 Dermal	Rabbit	1,060 mg/kg	-

Conclusion/Summary : Not available.

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Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetic acid	Eyes - Mild irritant	Rabbit	-	0.008 hrs	-
	Skin - Mild irritant	Human	-	24 hrs	-
	Skin - Severe irritant	Rabbit	-		-
	Skin - Mild irritant	Rabbit	-	24 hrs	-

Conclusion/Summary

Skin : Not available.
Eyes : Not available.
Respiratory : Not available.

Sensitization**Conclusion/Summary**

Skin : Not available.
Respiratory : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

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Eye contact	:	Causes serious eye damage.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	Causes severe burns.
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: 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

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

Short term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Long term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Potential chronic health effects

Conclusion/Summary	:	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.
Reproductive toxicity	:	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
Smoke Flavouring	N/A	9,403.3 mg /kg	N/A	N/A	N/A
Acetic acid	3,310 mg /kg	1,060 mg /kg	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

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Product/ingredient name	Result	Species	Exposure
Acetic acid			
	Acute LC50 75 mg/l Fresh water	Fish - Lepomis macrochirus	96 h
	Acute EC50 65 mg/l Fresh water	Daphnia - Daphnia magna	48 h
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 h
	Acute EC50 73.4 mg/l Fresh water	Algae - Navicula seminulum	96 h

Conclusion/Summary : Not available.

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Acetic acid	-	100 % - Readily biodegradable - 20 d	-	-

Conclusion/Summary : Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Acetic acid	-0.17	3.16	low

Mobility in soil

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 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.

Section 14. Transport information

Not classified as dangerous in the meaning of transport regulations.

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 to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112(b) : Not listed

Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN CORROSION - Category 1A
SERIOUS EYE DAMAGE - Category 1

Composition/information on ingredients

Name	%	Classification
Pyroligneous acids, hickory	>= 25 - <= 50	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
Acetic acid	>= 5 - <= 10	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY - dermal - Category 4 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1

State regulations

- Massachusetts** : The following components are listed:
Acetic acid
- New York** : The following components are listed:
Acetic acid
- New Jersey** : The following components are listed:
Acetic acid
- Pennsylvania** : The following components are listed:
Acetic acid

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals****Chemical Weapons Convention List Schedule I Chemicals**

None of the components are listed.

Chemical Weapons Convention List Schedule II Chemicals

None of the components are listed.

Chemical Weapons Convention List Schedule III Chemicals

None of the components are listed.

Montreal Protocol

None of the components are listed.

Stockholm Convention on Persistent Organic Pollutants**Annex A - Elimination - Production**

None of the components are listed.

Annex A - Elimination - Use

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None of the components are listed.

Annex B - Restriction - Production

None of the components are listed.

Annex B - Restriction - Use

None of the components are listed.

Annex C - Unintentional - Production

None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Rotterdam Convention on Prior Informed Consent (PIC) - Industrial

None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) - Pesticide

None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) -Severely hazardous pesticide

None of the components are listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Heavy metals - Annex 1

None of the components are listed.

POPs - Annex 1 - Production

None of the components are listed.

POPs - Annex 1 - Use

None of the components are listed.

POPs - Annex 2

None of the components are listed.

POPs - Annex 3

None of the components are listed.

Inventory list

Australia	:	Not determined.
Canada	:	Not determined.
China	:	Not determined.
Europe	:	Not determined.
Japan	:	Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	Not determined.

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Thailand	:	Not determined.
Turkey	:	Not determined.
United States	:	Not determined.
Viet Nam	:	Not determined.

Section 16. Other information

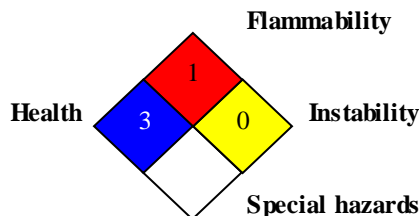
Hazardous Material Information System (U.S.A.)

Health	/	3
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
SKIN CORROSION - Category 1A	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method

History

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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

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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)
N/A = Not available
SGG = Segregation Group
UN = United Nations
References : Not available.

Notice to reader

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