

# *Chem-Impex International Inc.*

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## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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CATALOG #:	38214
NAME:	Rivastigmine L-tartrate
SYNONYMS:	3-[(S)-1-(Dimethylamino)ethyl]phenyl <i>N</i> -Ethyl- <i>N</i> -methylcarbamate L-tartrate <i>N</i> -Ethyl- <i>N</i> -methylcarbamic acid 3-[(S)-1-(Dimethylamino)ethyl]phenyl ester L-tartrate
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

### SECTION 2. HAZARDS IDENTIFICATION

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**CLASSIFICATION OF THE SUBSTANCE OR MIXTURE**

**GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)**

ACUTE TOXICITY, ORAL (CATEGORY 2), H300  
SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 2), H401  
LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 2), H411

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS  
PICTOGRAM**



SIGNAL WORD DANGER

**HAZARD STATEMENT(S)**

H300 FATAL IF SWALLOWED.  
H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

**PRECAUTIONARY STATEMENT(S)**

P264 WASH SKIN THOROUGHLY AFTER HANDLING.  
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.  
P273 AVOID RELEASE TO THE ENVIRONMENT  
P284 WEAR RESPIRATORY PROTECTION.  
P301 + P310 + P330 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER/DOCTOR. RINSE MOUTH.  
P391 COLLECT SPILLAGE.  
P405 STORE LOCKED UP.  
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

**HAZARDS NOT OTHERWISE CLASSIFIED (HNO) OR NOT COVERED BY GHS** NONE

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

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MF:  $C_{14}H_{22}N_2O_2 \cdot C_4H_6O_6$   
MW: 400.43  
CAS-NO. 129101-54-8  
PURITY:  $\geq 98\%$  (Assay by titration, HPLC)

**HAZARDOUS COMPONENTS**

COMPONENT	CLASSIFICATION	CONCENTRATION
Rivastigmine L-tartrate		

	ACUTE TOX. 2; AQUATIC ACUTE 2; AQUATIC CHRONIC 2; H300, H401, H411	<= 100 %
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FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

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## SECTION 4. FIRST-AID MEASURES

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### DESCRIPTION OF FIRST AID MEASURES

<b>GENERAL ADVICE</b>	CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.
<b>IF INHALED</b>	IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.
<b>IN CASE OF SKIN CONTACT</b>	WASH OFF WITH SOAP AND PLENTY OF WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL. CONSULT A PHYSICIAN.
<b>IN CASE OF EYE CONTACT</b>	FLUSH EYES WITH WATER AS A PRECAUTION.
<b>IF SWALLOWED</b>	NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.
<b>MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED</b>	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11
<b>INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED</b>	NO DATA AVAILABLE

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## SECTION 5. FIRE AND EXPLOSION DATA

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### EXTINGUISHING MEDIA

<b>SUITABLE EXTINGUISHING MEDIA</b>	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
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<b>SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE</b>	CARBON OXIDES, NITROGEN OXIDES (NOX)
<b>ADVICE FOR FIREFIGHTERS</b>	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
<b>FURTHER INFORMATION</b>	NO DATA AVAILABLE

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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<b>PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES</b>	WEAR RESPIRATORY PROTECTION. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST.  FOR PERSONAL PROTECTION SEE SECTION 8.
<b>ENVIRONMENTAL PRECAUTIONS</b>	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.
<b>METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP</b>	PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.
<b>REFERENCE TO OTHER SECTIONS</b>	FOR DISPOSAL SEE SECTION 13.

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## **SECTION 7. HANDLING AND STORAGE**

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<b>PRECAUTIONS FOR SAFE HANDLING</b>	FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS. AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2.
<b>CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</b>	KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE.

STORE WITH DESICCANT.

Store at 2 - 8 °C

**SPECIFIC END USE(S)** APART FROM THE USES MENTIONED IN SECTION 1.2  
NO OTHER SPECIFIC USES ARE STIPULATED

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### **CONTROL PARAMETERS**

#### **COMPONENTS WITH WORKPLACE CONTROL PARAMETERS**

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

### **EXPOSURE CONTROLS**

**APPROPRIATE ENGINEERING CONTROLS** AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH HANDS BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT.

### **PERSONAL PROTECTIVE EQUIPMENT**

**EYE/FACE PROTECTION** FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

**SKIN PROTECTION** HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

**BODY PROTECTION** COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

**RESPIRATORY PROTECTION** WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

**CONTROL OF ENVIRONMENTAL EXPOSURE**

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	White to almost white powder to crystal
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	124 - 128 °C
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

**OTHER SAFETY INFORMATION**

NO DATA AVAILABLE

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**SECTION 10. STABILITY AND REACTIVITY**

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**REACTIVITY** NO DATA AVAILABLE

**CHEMICAL STABILITY** STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	NO DATA AVAILABLE
<b>CONDITIONS TO AVOID</b>	NO DATA AVAILABLE
<b>INCOMPATIBLE MATERIALS</b>	STRONG OXIDIZING AGENTS
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES, NITROGEN OXIDES (NOX) IN THE EVENT OF FIRE: SEE SECTION 5

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## SECTION 11. TOXICOLOGICAL INFORMATION

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### INFORMATION ON TOXICOLOGICAL EFFECTS

<b>ACUTE TOXICITY</b>	LD50 ORAL - RAT - 13 MG/KG REMARKS: (EXTERNAL MSDS)
	INHALATION: NO DATA AVAILABLE
	DERMAL: NO DATA AVAILABLE
	NO DATA AVAILABLE
<b>SKIN CORROSION/IRRITATION</b>	SKIN - RABBIT RESULT: NO IRRITATION REMARKS: (EXTERNAL MSDS)
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	EYES - RABBIT RESULT: NO EYE IRRITATION (REGULATION (EC) NO. 440/2008, ANNEX, B.5)
<b>RESPIRATORY OR SKIN SENSITISATION</b>	MAXIMISATION TEST - GUINEA PIG RESULT: NEGATIVE (OECD TEST GUIDELINE 406)
<b>GERM CELL MUTAGENICITY</b>	AMES TEST SALMONELLA TYPHIMURIUM RESULT: NEGATIVE CHROMOSOME ABERRATION TEST IN VITRO HUMAN LYMPHOCYTES RESULT: POSITIVE (EXTERNAL MSDS) OECD TEST GUIDELINE 474 MOUSE RESULT: NEGATIVE

**CARCINOGENICITY**

IARC: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC.

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.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.

**REPRODUCTIVE TOXICITY** NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE** NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE** NO DATA AVAILABLE

**ASPIRATION HAZARD** NO DATA AVAILABLE

**ADDITIONAL INFORMATION** RTECS: NOT AVAILABLE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

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**SECTION 12. ECOLOGICAL INFORMATION**

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**TOXICITY**

TOXICITY TO FISH LC50 - LEPOMIS MACROCHIRUS (BLUEGILL) - 31.8 MG/L - 96 H  
REMARKS: (EXTERNAL MSDS)

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES LC50 - ONCORHYNCHUS MYKISS (RAINBOW TROUT) - > 100 MG/L - 96 H  
REMARKS: (EXTERNAL MSDS)

TOXICITY TO ALGAE EC50 - DAPHNIA MAGNA (WATER FLEA) - 1.4 MG/L - 48 H  
REMARKS: (EXTERNAL MSDS)  
IC50 - PSEUDOKIRCHNERIELLA SUBCAPITATA (GREEN ALGAE) - 43 MG/L - 72 H  
(OECD TEST GUIDELINE 201)



TOXICITY TO BACTERIA      EC50 - ACTIVATED SLUDGE - > 1,000 MG/L - 3 H  
REMARKS: (EXTERNAL MSDS)

**PERSISTENCE AND DEGRADABILITY**

BIODEGRADABILITY      AEROBIC - EXPOSURE TIME 28 D  
RESULT: 5 % - NOT READILY BIODEGRADABLE.  
REMARKS: (EXTERNAL MSDS)

**BIOACCUMULATIVE  
POTENTIAL**      NO DATA AVAILABLE

**MOBILITY IN SOIL**      NO DATA AVAILABLE

**RESULTS OF PBT AND  
VPVB ASSESSMENT**      PBT/VPVB ASSESSMENT NOT AVAILABLE AS  
CHEMICAL SAFETY ASSESSMENT NOT  
REQUIRED/NOT CONDUCTED

**OTHER ADVERSE EFFECTS**      AN ENVIRONMENTAL HAZARD CANNOT BE  
EXCLUDED IN THE EVENT OF UNPROFESSIONAL  
HANDLING OR DISPOSAL.  
TOXIC TO AQUATIC LIFE WITH LONG LASTING  
EFFECTS.

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**SECTION 13.      DISPOSAL CONSIDERATIONS**

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**WASTE TREATMENT METHODS**

**PRODUCT**      OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS  
TO A LICENSED DISPOSAL COMPANY.

**CONTAMINATED  
PACKAGING**      DISPOSE OF AS UNUSED PRODUCT.

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**SECTION 14.      TRANSPORT INFORMATION**

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**DOT (US)**

PROPER SHIPPING NAME:      TOXIC SOLID, ORGANIC, N.O.S. (Rivastigmine L-tartrate)

UN NUMBER:      2811

CLASS:      6.1

PACKING GROUP:      II

REPORTABLE QUANTITY

(RQ):

POISON INHALATION      NO

HAZARD:

**IMDG**

PROPER SHIPPING NAME:      TOXIC SOLID, ORGANIC, N.O.S. (Rivastigmine L-tartrate)

UN NUMBER: 2811  
CLASS: 6.1  
PACKING GROUP: II  
EMS-NO: F-A, S-A  
MARINE POLLUTANT: YES

**IATA**

PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S. (Rivastigmine L-tartrate)  
UN NUMBER: 2811  
CLASS: 6.1  
PACKING GROUP: II

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**SECTION 15. REGULATORY INFORMATION**

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**SARA 302 COMPONENTS** NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.

**SARA 313 COMPONENTS** 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.

**SARA 311/312 HAZARDS** NO SARA HAZARDS

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS**

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
Rivastigmine L-tartrate	129101-54-8	

**NEW JERSEY RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
Rivastigmine L-tartrate	129101-54-8	

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**SECTION 16. OTHER INFORMATION**

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**FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.**

H300 FATAL IF SWALLOWED.  
H411 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

**MSDS LEGEND**

MW: MOLECULAR WEIGHT  
MF: MOLECULAR FORMULA

VOC: VOLATILE ORGANIC COMPOUNDS  
ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL  
HYGINISTS  
CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER  
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)  
TLV: THRESHOLD LIMIT VALUE (ACGIH)

**IMPORTANT:**

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