



## California Steel Industries, Inc.

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1 California Steel Way; P.O. Box 5080  
Fontana Ca. 92335  
(909) 350-6300

Dear Customer:

In compliance with state Right-To-Know (RTK) laws, and the OSHA's Hazard Communication Standard which became effective November 25, 1995, we are providing you with a current, updated Material Safety Data Sheet (MSDS) for the product as you have requested from our website.

Each MSDS file includes the product MSDS produced by CSI, and is followed by applicable MSDSs from third party providers, such as treatments or coating oil. As different treatments may have been used on galvanized products, please contact your Sales representative if detailed information is required.

As it may be necessary for us to revise the MSDS to reflect changes affecting the health hazard information or changes in regulations, you should routinely update any information from our website.

Please check applicable state/federal regulations for information on your responsibility for retention and availability of these forms.

Sincerely,

Brad W. Bray  
Manager, Safety & Plant Protection



HOT ROLLED PICKLED CARBON AND HIGH STRENGTH – LOW ALLOY STEEL

Material Safety Data Sheet

For Emergency Call:
California Steel Industries, Inc. (909) 350-6296

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hot Rolled Pickled Carbon and High Strength – Low Alloy Steel (see Section 17)
CAS Number: 65997-19-5
Chemical Name: Rolled Steel
Chemical Family: Carbon Steel Alloy

Company Identification

Manufacturer's Name: California Steel Industries, Inc.
Address: 14000 San Bernardino Ave., Fontana, California 92335
Telephone – General Information: (909) 350-6284

2. COMPOSITION/INFORMATION ON INGREDIENTS

Table with 3 columns: Components, Typical Weight Percentage, CAS Number. Lists elements like Iron, Manganese, Silicon, Carbon, etc.



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3. HAZARDS IDENTIFICATION

**Emergency Overview**

Avoid contact with eyes. Wash thoroughly after handling.

Odorless, metallic gray solid.

**Potential Health Effects:**

Note: Steel products, under normal conditions, do not present an inhalation, ingestion or skin hazard. However, operations such as welding, grinding, sawing, and burning, which may cause airborne particulates or fume formation, may present a health hazard.

**Eyes:** Contact with dusts or particulates produced by cutting, welding or grinding may be abrasive and irritating to the eyes and cause stinging, watering, and redness.

**Skin:** Contact with dusts or particulates produced by cutting, welding or grinding may be abrasive and mildly irritating to the skin. Particulates may cause a red-brown pigmentation of the skin following repeated exposure. No harmful effects from skin absorption are expected.

**Inhalation (Breathing):** No LC50 toxicity data available for the product. Dusts or particulates produced by cutting, welding or grinding are expected to have a low degree of toxicity by inhalation.

**Ingestion (Swallowing):** No LD50 toxicity data available for the product. Dusts or particulates produced by cutting, welding or grinding are not known to be toxic.

**Signs and Symptoms:** Effects of overexposure may include irritation of the nose and throat and digestive tract.

**Cancer:** No information available on the cancer hazard of this material. However, a component has been identified as a cancer hazard (see Section 11).

**Target Organs:** A component of this product is a potential hazard to the male reproductive system (see Section 11).

**Developmental:** No data available.

**Other Comments:** Chronic exposure to manganese may result in a central nervous system disorder (manganism). Symptoms may include confusion, bizarre behavior, visual hallucinations, difficulty with speech and movement, tremor, loss of balance, decreased libido and impotence.

Chronic exposure to high concentrations of iron have been associated with hemosiderosis, hemochromatosis and in severe cases, liver cirrhosis. Typical occupational exposures to iron compounds are not expected to cause these effects. Chronic inhalation can produce "mottling" of the lungs (siderosis). This is considered a benign pneumoconiosis and does not normally lead to fibrosis or cause significant physiologic impairment.



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Metal fume fever is a brief, self-limited illness characterized by fever, chills, aching muscles, sweating, nausea, vomiting, and coughing. Symptoms typically occur several hours after exposure to metal oxide fumes and subside within 24-48 hours.

This material / product contains chemicals known to the State of California to cause cancer and/or reproductive toxicity (see sections 11 and 15).

**Medical Conditions Aggravated by Exposure:** Conditions aggravated by exposure may include skin disorders, respiratory (asthma-like) and male reproductive disorders.

**4. FIRST AID**

**Eyes:** If irritation or redness develops from dust exposure, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin:** First aid is not normally required. However, it is good practice to wash any material from the skin.

**Inhalation:** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek immediate medical attention

**Ingestion:** First aid is not normally required; however, if dust is swallowed and symptoms develop, seek medical attention.

**5. FIRE FIGHTING MEASURES**

**Flash Point (test method):** Not applicable

**Flammable Limits:** Not applicable

**Explosive Limits:** Not applicable

**Autoignition Temperature:** Not applicable

**Extinguishing Media:** For fires involving powder or dust, use dry chemicals, sand, earth, water spray or regular foam.

<b>NFPA Fire Rating:</b> Health Hazard	2
Flammability	0
Reactivity	0

**Key:** Least = 0, Slight = 1, Moderate = 2, High = 3, Extreme = 4

**Special Firefighting Procedures:** For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors. Cool equipment exposed to fire with water, if it can be done with minimal risk.



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**Unusual Fire and Explosive Hazards:** No unusual fire or explosive hazards are expected. However, dust powder or fumes are flammable or explosive when exposed to heat or flames

**6. ACCIDENTAL RELEASE MEASURES**

In case of dust release, stay upwind and away from spill. Notify persons down wind of spill/release, isolate immediate hazard area and keep unauthorized personnel out. Contain spill if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies. Sweep up and package appropriately for disposal.

**7. HANDLING AND STORAGE**

**Handling:** The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8). Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.

**Storage:** Keep away from any incompatible material (see Section 10).

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Ventilation:** If current ventilation practices are not adequate to maintain airborne dust concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required.

**Specific Personal Protective Equipment**

**Eyes:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

**Skin:** Not required based on the hazards of the material. However, it is considered good practice to wear gloves when handling chemicals.

**Respiratory:** A NIOSH/MSHA approved air purifying respirator with a type 95 particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see below). Protection provided by air-purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**Other:** Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn.



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Exposure Guidelines

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Nuisance particulates, if generated	10 mg/m <sup>3</sup> - total 3 mg/m <sup>3</sup> - respirable	None	15 mg/m <sup>3</sup> total 5 mg/m <sup>3</sup> respirable	None
Chromium	0.5 mg/m <sup>3</sup>	None	1 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Iron (oxide dust & fume)	5 mg/m <sup>3</sup>	None	10 mg/m <sup>3</sup>	None
Manganese	0.2 mg/m <sup>3</sup>	None	None	5 mg/m <sup>3</sup> (CEIL)
Nickel	1.5 mg/m <sup>3</sup> 0.2 mg/m <sup>3</sup> (insol)	None	1 mg/m <sup>3</sup>	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Metallic gray

Odor: Odorless

Odor threshold level: Not applicable

Physical state: Solid

pH: Not applicable

Vapor pressure (mmHg and temp): Not applicable

Vapor density (air = 1): Not applicable

Boiling point (at 1 atm): Not applicable

Melting point: 2750°F

Solubility in water: Insoluble

Specific gravity (H<sub>2</sub>O = 1): 7.85

Evaporation rate (butyl acetate = 1): Not applicable

10. STABILITY AND REACTIVITY

Stability (thermal, light, etc.): Stable under normal conditions of storage and handling.

Conditions to Avoid: Storage near strong oxidizers.

Incompatibility (materials to avoid): Avoid contact with strong oxidizers.

Hazardous Decomposition Products: Thermal decomposition may release hazardous metal fumes.

Hazardous Polymerization: Not applicable



**HOT ROLLED PICKLED CARBON AND HIGH STRENGTH – LOW ALLOY STEEL**

**11. TOXICOLOGICAL INFORMATION**

**Manganese CAS# 7439-96-5**

Repeated administration of manganese resulted in limited evidence of male reproductive effects in laboratory animals. The adverse effects included decreased spermatids, spermatocytes and degeneration of seminiferous tubules. Chronic administration of certain inorganic manganese salts has resulted in limited evidence of central nervous system effects in laboratory animals. The effects included degenerative changes in basal ganglionic cells.

**Nickel CAS# 7440-02-0**

There is sufficient evidence in animals for the carcinogenicity of metallic nickel, nickel monoxides, nickel hydroxides and crystalline nickel sulfides, and limited evidence in animals for other nickel compounds (e.g., alloys, arsenides and nickel carbonyl). Occupational exposure has been associated with cancer of the lung and nasal cavity. Nickel and nickel compounds have been identified as carcinogens by NTP and IARC.

**Welding Fumes**

Welding fumes may be different in composition from the original welding product, with the chief component being ordinary oxides of metal being welded. Chronic health effects (including cancer) have been associated with the fumes and dusts of individual component metals (see above), and welding fumes as a general category have been listed by IARC as a carcinogen. There is also limited evidence that welding fumes may cause adverse reproductive and fetal effects. Evidence is stronger where welding materials contain known reproductive toxicants.

This material / product contains chemicals known to the State of California to cause cancer and/or reproductive toxicity that may be released during welding (see section 15).

**12. ECOLOGICAL INFORMATION**

No ecological data are available.

**13. DISPOSAL CONSIDERATIONS**

This material, if discarded as produced, is not a RCRA "listed" or "characteristic" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

**14. TRANSPORT INFORMATION**

**DOT/TC/IMO/UN Proper Shipping Name:** Not regulated  
**DOT/TC/IMO/UN Identification Number:** Not applicable  
**DOT/IMO/UN Classification:** Not regulated



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15. REGULATORY INFORMATION

OSHA (Occupational Safety and Health Administration): This material is considered to be non-hazardous as defined by the OSHA Hazard Communication Standard. However, dusts and fumes from this product may be hazardous as identified in Sections 3 and 11.

Table with 9 columns: Component, TSCA Inventory, DSL, SARA 313 (Deminimus), SARA 302, SARA 304, CERCLA RQ, CAA 112(r), CA Prop 65. Rows list elements like Aluminum, Boron, Calcium, Carbon, Chromium, etc.

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material / product contains chemicals (as listed above) known to the State of California to cause cancer and/or reproductive toxicity.

Sections 311/312: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of SARA Title III and is considered, under applicable definitions, to meet the following categories:

Acute: No          Chronic: Yes          Fire: No          Reactivity: No

This material has not been identified as a carcinogen by NTP, IARC or OSHA.





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**NOTIFICATION PURSUANT TO EPCRA, 40 CFR PART 372.45**

This material contains toxic chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372. The following chemicals contained in this material are subject to the reporting requirements of Section 313:

Chemical	CAS Number	Typical Weight Percentage
Aluminum	7429-90-5	0.08 max
Chromium	7440-47-3	0.10 max
Copper	7440-50-8	0.35 max
Manganese	7439-96-5	0.10-1.60
Nickel	7440-02-0	0.10 max
Phosphorus	7723-14-0	0.080 max
Vanadium	7440-62-2	0.08 max

**16. Documentary Information and DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

Issue Date: April 29, 2005

Previous Issue Date: September 1, 2004

This product is typically coated with an oil to prevent oxidation. Hazards associated with exposure to the oil are not covered on this MSDS. An accompanying MSDS specific to the hazards associated with the oil must be used with this MSDS. If the oil MSDS is not included with this MSDS, contact California Steel Industries, Inc. for a copy of the oil MSDS.

The information in this document is believed to be correct as of the date issued. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

D. A. STUART COMPANY  
MATERIAL SAFETY DATA SHEET

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION  
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CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME . . . . . : STEELSHIELD 6299  
PRODUCT ID NUMBER . . . . . : 08935.00  
PRODUCT CLASS . . . . . : RUST PREVENTIVE

MANUFACTURER IDENTIFICATION:

NAME . . . . . : D. A. STUART COMPANY  
ADDRESS . . . . . : 4580 WEAVER PARKWAY  
WARRENVILLE IL  
60555  
TELEPHONE . . . . . : 630-393-0833

FOR CHEMICAL EMERGENCY

Spill, leak, fire, exposure, or accident  
EMERGENCY CONTACT . . . . . : CHEMTREC  
EMERGENCY TELEPHONE . . . . . : (800) 424-9300  
(703) 527-3887 (INTERNATIONAL)

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SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS  
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1  
CAS# 64742-47-8  
PETROLEUM DISTILLATES, HYDROTREATED LIGHT  
PCT BY WT: < 2  
EXPOSURE LIMIT:  
ACGIH TLV/TWA: 100 PPM  
OSHA PEL/TWA: 100 PPM

2 BHT  
CAS# 128-37-0  
2,6-DI-T-BUTYL-4-METHYLPHENOL  
PCT BY WT: < 2  
EXPOSURE LIMIT:  
ACGIH TLV/TWA: 2 MG/M3  
OSHA PEL/TWA: 2 MG/M3

3  
CAS# MIXTURE  
SYNTHETIC OIL-SOLUBLE SULFONATE, SODIUM SALTS  
PCT BY WT: < 3  
EXPOSURE LIMIT:  
ACGIH TLV/TWA: 5 MG/M3  
ACGIH TLV/STEL: 10 MG/M3  
OSHA PEL/TWA: 5 MG/M3

4  
CAS# 64742-46-7  
PETROLEUM HYDROCARBONS  
PCT BY WT: < 10  
EXPOSURE LIMIT:

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ACGIH TLV/TWA: 5 MG/M3 (OILMIST)  
ACGIH TLV/STEL: 10 MG/M3 (OILMIST)  
OSHA PEL/TWA: 5 MG/M3 (OILMIST)

\*\*\*\*\*  
This product contains no components, present in excess of 0.1%  
by weight, which are listed as carcinogens by IARC, NTP, or OSHA.  
\*\*\*\*\*

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE HEALTH HAZARDS: prolonged or frequent contact may cause skin and eye irritation. Inhalation of mists/vapors may cause respiratory irritation.

CHRONIC HEALTH HAZARDS: Not determined for the product as a whole.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:  
Possible red and/or itching skin due to overexposure.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with water at once for at least 15 minutes, lifting upper and lower lids to ensure even flushing. Seek medical attention.

SKIN CONTACT: Remove contaminated clothing immediately, and wash affected area thoroughly with soap and water. If irritation persists, seek medical attention.

INHALATION: If a person breathes in large amounts of this product, move the exposed person to fresh air at once. If breathing becomes difficult, administer oxygen and seek immediate medical attention.

INGESTION: Rinse mouth immediately. Never give anything to an unconscious person. Do not induce vomiting unless advised by a physician. Seek immediate medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES:  
Flashpoint . . . . . 345.0 °F COC  
Auto-ignition temperature. -N/A  
Lower Explosion Limit. . . -N/A  
Upper Explosion Limit. . . -N/A

EXTINGUISHING MEDIA:  
Dry Chemical, Foam, CO2, Water Fog

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UNUSUAL FIRE AND EXPLOSION HAZARDS:  
None

SPECIAL FIRE FIGHTING PROCEDURES:  
None

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Persons not wearing proper personal protective equipment as stated in Section 8 should be excluded from area of spill. Extinguish all flames in the vicinity. Dike spill and soak up with inert absorbent material. Place in appropriate containers and affix proper labels.

Store containers closed, away from ignition sources such as open flames. Keep away from extreme temperatures.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store containers closed, away from ignition sources such as open flames. Keep away from extreme temperatures.

OTHER PRECAUTIONS:

Use good personal hygiene. For industrial use only. Avoid breathing mists and vapors. Wear all appropriate personal protection equipment at all times.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EYE PROTECTION: Safety Glasses

PROTECTIVE GLOVES: Impervious, Nitrile or Neoprene

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

An eyewash fountain should be located nearby work area at all times for emergency use.

RESPIRATORY PROTECTION (Specify Type):

If ventilation equipment is not sufficient to keep airborne concentrations below exposure limits, a NIOSH approved respirator should be worn.

VENTILATION:

Local Exhaust: Recommended  
Mechanical: None Special  
Special: None Special  
Other: None Special

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WORK/HYGENIC PRACTICES:

Use good personal hygiene at all times. Launder soiled clothing before reuse. Wash hands thoroughly before eating or smoking.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance . . . . .	:	AMBER		
Odor . . . . .	:	CHARACTERISTIC ODOR		
Physical State . . . . .	:	LIQUID		
pH . . . . .	:	-N/A		
Vapor Pressure . . . . .	:	-N/A		
Vapor Density . . . . .	:	-N/A		
Boiling Range . . . . .	:	Lower -	N/A	GF
		Higher -	N/A	GF
Water Solubility . . . . .	:	INSOLUBLE		
Specific Gravity . . . . .	:	.911		
Evaporation Rate . . . . .	:	-N/A		

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY (Materials To Avoid): Strong oxidizing agents, strong acids  
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon Monoxide and Carbon Dioxide

Oil-based products may fume when heated.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Keep away from heat, sparks, open flames, or all sources of ignition. Do not store next to or with incompatible materials.

SECTION 11 - TOXICOLOGICAL INFORMATION

Please refer to Section 3 for information on potential health effects.

SECTION 12 - ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Follow all Federal, State, Local and Corporate Regulations for disposal. The disposal method and manner practices should be acceptable to good waste management practices and follow applicable codes and regulations.

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SECTION 14 - TRANSPORT INFORMATION

SHIPPING INFORMATION:

NOT DOT REGULATED

SECTION 15 - REGULATORY INFORMATION

SARA 311 AND 312 INFORMATION:

This product contains the following substances defined as Hazardous by OSHA Hazard Communication Standard 29 CFR 1910.1200 (d).

CAS#	Chemical Name	% By Weight
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See Section 2

SARA 313 INFORMATION:

This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SECTION 16 - OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) INFORMATION:

Health- 1	Flammability- 1
Reactivity- 0	Personal Protective Equipment- X

PPE "X" = Ask Supervisor For Specialized Handling Instructions

Prepared by . . . . . : EHS Department  
MSDS Last Revision Date . . . . . : 05/05/2008  
MSDS Print Date . . . . . : 07/23/2008

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