STAY/STEEL 316L K Flake Standard Grade

Version	Revision Date:	SDS Number:	Date of last issue: 12/12/2019
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SECTION 1. IDENTIFICATION

Product name : STAY/STEEL 316L K Flake Standard Grade
Product code : 022230BF0

Manufacturer or supplier's details

Company name of supplier : ECKART America Corporation
Address : 830 East Erie Street
Painesville OH 44077
Telephone : 866-458-7837
Telefax : (440) 354-6224
Emergency telephone : **CHEMTREC**: 800-424-9300
CHEMTREC: 1-703-527-3387 (International)

NCEC:
(contract no. ECKART29003-NCEC)
US: +1 866 928 0789 (Toll free)
Canada: +1 800 579 7421 (Toll Free)
Mexico: +52 55 5004 8763

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Combustible dust

Skin sensitization : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity - repeated exposure (Inhalation) : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : May form combustible dust concentrations in air.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated

exposure if inhaled.

Precautionary Statements :

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:
Nickel

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Iron	7439-89-6	>= 50 - < 70
Chromium	7440-47-3	>= 10 - < 20
Nickel	7440-02-0	>= 1 - < 10

Molybdenum	7439-98-7	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice	:	No hazards which require special first aid measures.
If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of eye contact	:	Remove contact lenses. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIRE-FIGHTING MEASURES

Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid dust formation.
Methods and materials for containment and cleaning up	:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Conditions for safe storage	:	Electrical installations / working materials must comply with

the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

Further information on storage stability : Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Chromium	7440-47-3	TWA	0.5 mg/m3	NIOSH REL
		TWA	0.5 mg/m3	ACGIH
		TWA	1 mg/m3	OSHA P0
		TWA	0.5 mg/m3 (chromium)	OSHA Z-1
		TWA	1 mg/m3	OSHA P0
		TWA	0.5 mg/m3	NIOSH REL
		TWA	1 mg/m3 (chromium)	OSHA Z-1
		TWA	0.5 mg/m3 (chromium)	OSHA Z-1
		TWA	0.5 mg/m3 (chromium)	ACGIH
Nickel	7440-02-0	TWA	0.015 mg/m3 (Nickel)	NIOSH REL
		TWA (Inhalable fraction)	1.5 mg/m3	ACGIH
		TWA	1 mg/m3	OSHA P0
		TWA	1 mg/m3	OSHA P0
		TWA	1 mg/m3 (Nickel)	OSHA Z-1
		TWA	0.015 mg/m3 (Nickel)	NIOSH REL
		TWA (Inhalable fraction)	1.5 mg/m3	ACGIH
Molybdenum	7439-98-7	TWA (Inhalable fraction)	10 mg/m3	ACGIH
		TWA	3 mg/m3	ACGIH

		(Respirable fraction)		
		TWA (Inhalable fraction)	10 mg/m3 (Molybdenum)	ACGIH
		TWA (Respirable fraction)	3 mg/m3 (Molybdenum)	ACGIH
		TWA (total dust)	15 mg/m3 (Molybdenum)	OSHA Z-1
		TWA (Total dust)	10 mg/m3 (Molybdenum)	OSHA P0
Iron	7439-89-6	TWA (total dust)	50 Million particles per cubic foot	OSHA Z-3
		TWA (total dust)	15 mg/m3	OSHA Z-3
		TWA (respirable fraction)	5 mg/m3	OSHA Z-3
		TWA (respirable fraction)	15 Million particles per cubic foot	OSHA Z-3
Chromium	7440-47-3	TWA	0.5 mg/m3	NIOSH REL
		TWA	0.5 mg/m3	ACGIH
		TWA	1 mg/m3	OSHA P0
		TWA	0.5 mg/m3 (chromium)	OSHA Z-1
		TWA	1 mg/m3	OSHA P0
		TWA	0.5 mg/m3	NIOSH REL
		TWA	1 mg/m3 (chromium)	OSHA Z-1
		TWA	0.5 mg/m3 (chromium)	OSHA Z-1
		TWA	0.5 mg/m3 (chromium)	ACGIH
Nickel	7440-02-0	TWA	0.015 mg/m3 (Nickel)	NIOSH REL
		TWA (Inhalable fraction)	1.5 mg/m3	ACGIH
		TWA	1 mg/m3	OSHA P0
		TWA	1 mg/m3	OSHA P0
		TWA	1 mg/m3	OSHA Z-1

			(Nickel)	
		TWA	0.015 mg/m3 (Nickel)	NIOSH REL
		TWA (Inhalable fraction)	1.5 mg/m3	ACGIH
Molybdenum	7439-98-7	TWA (Inhalable fraction)	10 mg/m3	ACGIH
		TWA (Respirable fraction)	3 mg/m3	ACGIH
		TWA (Inhalable fraction)	10 mg/m3 (Molybdenum)	ACGIH
		TWA (Respirable fraction)	3 mg/m3 (Molybdenum)	ACGIH
		TWA (total dust)	15 mg/m3 (Molybdenum)	OSHA Z-1
		TWA (Total dust)	10 mg/m3 (Molybdenum)	OSHA P0

Personal protective equipment

Eye protection : Safety glasses
Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder
Color : silver
Odor : odorless
Odor Threshold : No data available
pH : No data available
Melting point/freezing point : No data available
Initial boiling point and boiling range : No data available
Flash point : No data available
Evaporation rate : No data available
Flammability (solid, gas) : combustible dust

Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : No data available

Vapor pressure	:	No data available
Relative density	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Dust may form explosive mixture in air. Stable under recommended storage conditions.
Conditions to avoid	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Components:

Chromium:

Acute oral toxicity	:	LD50 Oral: > 5,000 mg/kg
Acute inhalation toxicity	:	LC50: > 5.41 mg/l Exposure time: 4 h Test atmosphere: dust/mist

Nickel:

Acute oral toxicity	:	LD50 Oral: 9,000 mg/kg

Molybdenum:

Acute oral toxicity	:	LD50 Oral: > 2,000 mg/kg
Acute inhalation toxicity	:	LC50: ca. 2 mg/l Exposure time: 4 h Test atmosphere: dust/mist

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Components:

Nickel:
Result: May cause sensitization by skin contact.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Components:

Nickel:

Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies
IARC		Group 1: Carcinogenic to humans
		Nickel 7440-02-0
		Group 2B: Possibly carcinogenic to humans
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		Reasonably anticipated to be a human carcinogen
		Nickel 7440-02-0

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.

Components:

Nickel:
Routes of exposure: Inhalation
Assessment: Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity
Not classified based on available information.

Further information

Components:

Iron:
Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Nickel:

Ecotoxicology Assessment
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Other adverse effects
No data available

Components:

Iron:
Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

Domestic regulation

49 CFR : Not classified as dangerous in the meaning of transport regulations.

International Regulations

Remarks : Not classified as dangerous in the meaning of transport regulations.

ADR : Not classified as dangerous in the meaning of transport regulations.

IATA-DGR : Not classified as dangerous in the meaning of transport regulations.

IMDG-Code : Not classified as dangerous in the meaning of transport regulations.

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)
Nickel	7440-02-0	100

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

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

SARA 311/312 Hazards : Combustible dust
Respiratory or skin sensitization
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Chromium	7440-47-3	>= 10 - < 20 %
Nickel	7440-02-0	>= 5 - < 10 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Chromium	7440-47-3	19.89 %
Nickel	7440-02-0	7.46 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Chromium	7440-47-3	19.89 %
Nickel	7440-02-0	7.46 %

US State Regulations

Massachusetts Right To Know

Chromium	7440-47-3
Nickel	7440-02-0
Molybdenum	7439-98-7

Pennsylvania Right To Know

Iron	7439-89-6
Chromium	7440-47-3
Nickel	7440-02-0
Molybdenum	7439-98-7
Manganese	7439-96-5

California Prop. 65

WARNING: This product can expose you to chemicals including lead and cadmium, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

WARNING: This product can expose you to chemicals including Nickel, Cobalt, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

Iron	7439-89-6
Chromium	7440-47-3
Nickel	7440-02-0
Molybdenum	7439-98-7

California Permissible Exposure Limits for Chemical Contaminants

Iron	7439-89-6
Chromium	7440-47-3
Nickel	7440-02-0
Molybdenum	7439-98-7

The ingredients of this product are reported in the following inventories:

DSL	:	All components of this product are on the Canadian DSL
TSCA	:	On TSCA Inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average

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

Revision Date : 03/25/2020

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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