

Issue date 01-Jun-2018

Revision date 14-Jan-2020

Revision Number 2

1. IDENTIFICATION

Product identification

Product identifier	Cronatron™ 338 Mild and Carbon Steel Stick Rod Electrode
Other means of identification	CW1058A
Recommended use	Electrode
Restrictions on use	Covered electrode for Shielded Metal Arc Welding (SMAW), These items are only intended for normal welding purposes

Supplier

Corporate Headquarters:
Cronatron, A Lawson Brand
Lawson Products, Inc.
8770 W. Bryn Mawr Ave. - Suite 900
Chicago, IL 60631
1-866-529-7664

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Mississauga, ON L5N 5Z4
(800) 323-5922

24 Hour Emergency Phone Number (888) 426-4851 (Prosar)

Website <https://www.lawsonproducts.com>

Methylene Chloride notification No Information Available

2. HAZARD(S) IDENTIFICATION

Hazard Classification This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), WHMIS 2015 and GHS Regulations.

Carcinogenicity	Category 2
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Symbol



Signal word WARNING

Hazard statements H351 - Suspected of causing cancer

Precautionary statements

General	P101 - If medical advice is needed, have product container or label at hand P102 - Keep out of reach of children P103 - Read label before use.
Prevention	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing and eye/face protection P281 - Use personal protective equipment as required
Response	
General	P308 + P313 - IF exposed or concerned: Get medical advice/attention P321 - For Specific treatment see section 4 of this sds
Storage	P405 - Store locked up
Disposal	P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable
Hazard(s) Not Otherwise Classified (HNOC)	None known.
Physical Hazards Not Otherwise Classified (PHNOC)	When this product is used in a welding process the most important hazards are: heat, radiation, electric shock and welding fumes.
Unknown acute toxicity	None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition Mixture.

Chemical name	CAS-No	Weight %
Iron	7439-89-6	65-75
Titanium dioxide	13463-67-7	5-15
Silica Flint	60676-86-0	1-11
Potassium Silicate	1312-76-1	1-11
Feldspar	68476-25-5	1-11
Manganese	7439-96-5	1-11
Kaolinite, Hydrous Aluminum Silicate	1332-58-7	1-11
Cellulose	9004-34-6	1-11
Iron Oxide	1309-38-2	1-5

4. FIRST-AID MEASURES

Necessary first-aid measures

General Information	Call for medical aid. Employ First Aid techniques recommended by the Red Cross.
Inhalation	Remove to fresh air immediately or administer oxygen. Get medical attention immediately.
Ingestion	Seek medical attention immediately. Rinse mouth with water.
Skin contact	Flush contaminated skin with plenty of water. Seek medical attention if irritation occurs. If rash develops, see a physician. For skin burns from arc radiation, promptly flush with cold water. Get medical attention for burns or irritations that persist.
Eye contact	Flush with a large amount of fresh water for at least 15 minutes to remove dusts or fumes.

	Get medical attention. For radiation burns due to arc flash, see physician.
Most important symptoms (acute)	Not available.
Most important symptoms (over-exposure)	Not available.
Indication of any immediate medical attention and special treatment needed	In case of ELECTRIC SHOCK: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live wire parts or wires. If breathing has stopped, begin artificial respiration and obtain medical assistance immediately. If no detectable pulse, begin Cardiopulmonary Resuscitation. (CPR) and immediately call for medical aid.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry Chemical, Carbon Dioxide, Foam or Water Fog. Use the extinguishing media recommended for the burning material and fire situation.
Unsuitable extinguishing media	Do not use water on molten metal. Large fires may be flooded with water from a safe distance.
Specific hazards	Welding arc and sparks can ignite combustibles. Refer to American National Standard Z49.1 for fire prevention during welding. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Iron Oxide. Manganese oxide. Aluminum oxide.
Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Reasonably expected fume constituents of the fume could include complex oxides of iron.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Solid objects may be picked up and placed in a container. Make sure the solid objects are at room temperature before handling. Gloves should be worn when handling to prevent cuts. Use personal protection recommended in Section 8.
Methods and materials for containment and cleaning up	Do not flush residue into waterways. Do not discard as refuse. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Precautions for safe handling	Handle with care to avoid stings or cuts. Before using this product, contact your doctor to determine if exposure to this product or use of this product will aggravate your medical conditions. Handle with care to avoid cuts and prevent the wire from piercing the skin. Wear gloves. Some individuals may develop an allergic reaction to certain materials. Keep all warning and identification labels on the product. Avoid exposure to dust and do not ingest. Gloves should be worn when handling to prevent cuts. Warn wearers of heart pacemakers or other medical electronic equipment vital to life that welding operations may impede the function of the medical device.
Conditions for safe storage, including any incompatibilities	Keep material sealed and dry before use. After using, keep remaining product sealed and dry and do not remove product identification label or warning label. Do not remove product identification label or warning label. Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	OSHA PEL (TWA)	ACGIH OEL (TWA)	NIOSH - TWA
Iron	-	-	-
Titanium dioxide	15 mg/m ³ TWA	10 mg/m ³ TWA	2.4 mg/m ³ TWA 0.3 mg/m ³ TWA
Silica Flint	-	-	-
Potassium Silicate	-	-	-
Feldspar	-	-	-
Manganese	5 mg/m ³ Ceiling	0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	3 mg/m ³ STEL 1 mg/m ³ TWA 1 mg/m ³ TWA
Kaolinite, Hydrous Aluminum Silicate	15 mg/m ³ TWA 5 mg/m ³ TWA	2 mg/m ³ TWA	10 mg/m ³ TWA 5 mg/m ³ TWA
Cellulose	15 mg/m ³ TWA 5 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA 5 mg/m ³ TWA 1 mg/m ³ TWA
Iron Oxide	-	-	-

Appropriate engineering controls

Adequate ventilation should be provided to keep exposure levels below current acceptable exposure limits. Read and understand the manufacturer's instructions and precautionary label on this product. Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases below the TLV's in the workers breathing zone and the general area. Train welder to keep head out of fumes. Monitor fume levels and do not exceed permissible exposure limits or values. Wear head, hand and body protection which help prevent injury from radiation, sparks, heat, and electrical shock. See ANSI Z49.1. When the electrode is consumed, the fume and gas decomposition products are different in percent and form from the ingredients listed in Section 3. Fume and decomposition products, not the ingredients in the electrode, are important. Decomposition products include those originating from the volatilization, reaction or oxidation of the wire or rod plus those from the base metal and coating. These components are virtually always present as complex oxides and not as metals. Reasonably expected fume constituents of the fume could include complex oxides of iron and manganese.

Individual protection measures, such as personal protective equipment

Eye protection

Wear a helmet or face shield with a filter lens of shade 12 or darker. Provide screens and flash goggles to shield others.

Skin and body protection

Wear head, hand, and body protection which help to prevent injury from radiation, sparks, and electrical shock. See ANSI Z49.1. At a minimum, this includes welders' gloves and a protective face shield and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to touch live electrical parts and to insulate themselves from work and ground, especially if clothing and gloves are wet. Type B gloves are recommended when high dexterity is required for TIG welding, while Type A gloves are recommended for other welding processes. The contact temp (°C) is 100 and the threshold time is >15 seconds.

Respiratory protection

Use respirable fume respirator or air supplied respirator when welding in a confined space or where local exhaust or ventilation does not keep exposure below the TLV's. Monitor fume levels and do not exceed permissible exposure limits or values. One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet, if worn, or in the worker's breathing zone. See ANSI/AWS F1.1.

Hygiene measures

Do not eat, drink or smoke when using this product.

Canadian Province Occupational Exposure Limits

Chemical name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick - OEL	Newfoundland and Labrador - OEL	Nova Scotia - OEL	Ontario OEL	Prince Edward Island - OEL	Quebec OEL	Saskatchewan - OEL

Chemical name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick - OEL	Newfoundland and Labrador - OEL	Nova Scotia - OEL	Ontario OEL	Prince Edward Island - OEL	Quebec OEL	Saskatchewan - OEL
Iron	-	-	-	-	-	-	-	-	-	-
Titanium dioxide	10 mg/m ³ TWA	10mg/m ³ T WA 3mg/m ³ TW A	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	20 mg/m ³ STEL 10 mg/m ³ TWA
Silica Flint	-	-	-	0.1 mg/m ³ TWA	-	-	0.1 mg/m ³ TWA	-	0.1 mg/m ³ TWA	0.1 mg/m ³ TWA
Potassium Silicate	-	-	-	-	-	-	-	-	-	-
Feldspar	-	-	-	-	-	-	-	-	-	-
Manganese	0.2 mg/m ³ TWA	0.2mg/m ³ T WA 0.02mg/m ³	0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	0.2 mg/m ³ TWA	0.02 mg/m ³ TWA 0.1 mg/m ³ TWA 0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	0.2 mg/m ³ TWA 0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	0.02 mg/m ³ TWA 0.1 mg/m ³ TWA 0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	0.2 mg/m ³ TWA 0.2 mg/m ³ TWA	0.6 mg/m ³ STEL 0.2 mg/m ³ TWA 0.2 mg/m ³ TWA
Kaolinite, Hydrous Aluminum Silicate	2 mg/m ³ TWA	2mg/m ³ TW A	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ TWA	5 mg/m ³ TWA	4 mg/m ³ STEL 2 mg/m ³ TWA
Cellulose	10 mg/m ³ TWA 5 mg/m ³ TWA	10mg/m ³ T WA 3mg/m ³ TW A	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	10 mg/m ³ TWA	20 mg/m ³ STEL 10 mg/m ³ TWA
Iron Oxide	-	-	-	-	-	-	-	-	-	-

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Color	Tan
Odor	None
Odor threshold	Not available
pH	Not applicable
Melting point/range °C	>1300
Melting point/range °F	>2300
Boiling point/range °C	Not available
Boiling point/range °F	Not available
Flash point °C / °F	Not available
Evaporation rate	Not available
Flammability (Solid, Gas)	Not available
Lower explosion limit	Not available
Upper explosion limit	Not available
Vapor pressure	Not applicable
Vapor density	Not available

Relative density	6-9 g/cm ³
Solubility	insoluble
Partition coefficient (n-octanol/water)	Not available
Autoignition temperature °C	Not available
Autoignition temperature °F	Not available
Decomposition temperature °C	Not available
Decomposition temperature °F	Not available
Viscosity	Not available

10. STABILITY AND REACTIVITY

Reactivity	Contact with chemical substances like acids or strong bases could cause generation of gas.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Not available.
Incompatible materials	Contact with chemical substances like acids or strong bases could cause generation of gas.
Hazardous decomposition products	When this product is used in a welding process, hazardous decomposition product would include those from volatilization, reaction or oxidation of the material listed in section 3 and those from the base metal and coating. The amount of fumes generated from this product varies with welding parameters and dimensions. Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in section 3. Manganese has a low exposure limit, in some countries that may be easily exceeded. Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quality of fumes and gases produced.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	Dermal. Inhalation. Eyes.
Symptoms	Welding fumes cannot be classified simply. Their composition and quantity are dependent upon the metal being welded, the process, procedures and electrodes being used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: Coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality and the amount of ventilation, position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities). The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans (group 2B). Pre-existing respiratory or allergic conditions may be aggravated in some individuals (i.e. asthma, emphysema). Overexposure to welding fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat or eyes. Primary route of entry is the respiratory system. Iron, iron oxide, manganese: remove from overexposure and apply artificial respiration if needed. Ingestion not an expected route of entry, but if ingested product could cause serious injury. Arc Rays

can injure eyes. Spatter and molten metal can cause burn injuries. Electric shock can kill. Skin cancer has been reported from arc radiation. May cause an allergic skin reaction. Warn wearers of heart pacemakers or other medical electronic equipment vital to life that welding operations may impede the function of the medical device.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Overexposure to welding fumes may affect pulmonary function and eyes. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait. Prolonged inhalation of Titanium Dioxide (Classified 2B by IARC) above safe exposure limits can cause cancer. Prolonged inhalation of Crystalline Silica (Classified 1 by IARC and K by NTP) above safe exposure limits can cause cancer.

Numerical measures of toxicity

Chemical name	Inhalation LC50:	Dermal LD50:	Oral LD50:
Iron	-	-	= 30 g/kg (Rat)
Titanium dioxide	-	-	> 10000 mg/kg (Rat)
Silica Flint	-	-	-
Potassium Silicate	-	-	= 5700 mg/kg (Rat)
Feldspar	-	-	-
Manganese	-	-	= 9 g/kg (Rat)
Kaolinite, Hydrous Aluminum Silicate	-	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)
Cellulose	> 5800 mg/m ³ (Rat) 4 h	> 2 g/kg (Rabbit) > 2000 mg/kg (Rabbit)	> 5 g/kg (Rat)
Iron Oxide	-	-	> 10000 mg/kg (Rat) Oral LD50 Rat >10000 mg/kg (Source: NLM_CIP)

- ATEmix (dermal)** Not available
- ATEmix (oral)** Not available
- ATEmix (inhalation-gas)** Not available
- ATEmix (inhalation-vapor)** Not available
- ATEmix (inhalation-dust/mist)** Not available

Carcinogenicity

Chemical name	ACGIH OEL - Carcinogens	IARC	OSHA RTK Carcinogens	NTP
Iron	-	-	-	-
Titanium dioxide	A4	Group 2B	Listed	-
Silica Flint	-	Group 3	-	-
Potassium Silicate	-	-	-	-
Feldspar	-	-	-	-
Manganese	A4	-	-	-
Kaolinite, Hydrous Aluminum Silicate	A4	-	-	-
Cellulose	-	Group 1	Listed	Known Carcinogen
Iron Oxide	-	-	-	-

Canadian Province carcinogenicity limits

Chemical name	Alberta - Carcinogen	British Columbia - Carcinogen	Manitoba - Carcinogen	New Brunswick - Carcinogen	Nova Scotia - Carcinogen	Quebec - Carcinogen
Iron	-	-	-	-	-	-
Titanium dioxide	-	IARC 2B	ACGIH A4	ACGIH A4	ACGIH A4	-
Silica Flint	-	-	-	-	-	-
Potassium Silicate	-	-	-	-	-	-
Feldspar	-	-	-	-	-	-
Manganese	-	-	ACGIH A4	-	ACGIH A4	-
Kaolinite, Hydrous Aluminum Silicate	-	-	ACGIH A4	ACGIH A4	ACGIH A4	-
Cellulose	-	-	-	-	-	-
Iron Oxide	-	-	-	-	-	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish
Iron	-	13.6: 96 h <i>Morone saxatilis</i> mg/L LC50 static
Titanium dioxide	-	-
Silica Flint	-	-
Potassium Silicate	-	301 - 478: 96 h <i>Lepomis macrochirus</i> mg/L LC50 3185: 96 h <i>Brachydanio rerio</i> mg/L LC50 semi-static
Feldspar	-	-
Manganese	-	-
Kaolinite, Hydrous Aluminum Silicate	-	-
Cellulose	-	-
Iron Oxide	-	-

Persistence and degradability The welding rods consist of elements that cannot degrade any further in the environment.

Bioaccumulation Welding rods contain heavy metals which bio accumulates in the food chain. The following figures are the bio concentration factor (BCF) for the substances on their own. BCF: Iron, BCF: 140000 ; Manganese, BCF: 59052

Chemical name	CAS-No	Partition coefficient (log Kow)
Iron 7439-89-6	7439-89-6	-
Titanium dioxide 13463-67-7	13463-67-7	-
Silica Flint 60676-86-0	60676-86-0	-
Potassium Silicate 1312-76-1	1312-76-1	-
Feldspar 68476-25-5	68476-25-5	-
Manganese 7439-96-5	7439-96-5	-
Kaolinite, Hydrous Aluminum Silicate 1332-58-7	1332-58-7	-
Cellulose 9004-34-6	9004-34-6	-

Chemical name	CAS-No	Partition coefficient (log Kow)
Iron Oxide 1309-38-2	1309-38-2	-

Mobility in soil Welding rods are not soluble in water or soil. Particles formed by working welding rods can be transported in the air.

Other adverse effects In massive form, welding rods present no hazards to the aquatic environment. Welding consumables and materials can degrade into the components used to manufacture the product. Avoid exposure to conditions that could lead to accumulation in soils and groundwater. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

13. DISPOSAL CONSIDERATIONS

Disposal information As supplied, this product is classified as non-hazardous waste according to RCRA regulations. Residue from welding consumables and processes could degrade and accumulate in soils and groundwater.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal. Dispose in accordance with local, state and federal regulations.

14. TRANSPORTATION INFORMATION

Shipping Descriptions

DOT
Proper shipping name Not regulated

TDG
Proper shipping name Not regulated

IATA
Proper shipping name Not regulated

IMDG/IMO
Proper shipping name Not regulated

Marine Pollutants

Chemical name	CAS-No	USDOT Marine Pollutant	Canada TDG Marine Pollutant	IMDG Marine Pollutant
Iron	7439-89-6	-	-	-
Titanium dioxide	13463-67-7	-	-	-
Silica Flint	60676-86-0	-	-	-
Potassium Silicate	1312-76-1	-	-	-
Feldspar	68476-25-5	-	-	-
Manganese	7439-96-5	-	-	-
Kaolinite, Hydrous Aluminum Silicate	1332-58-7	-	-	-
Cellulose	9004-34-6	-	-	-
Iron Oxide	1309-38-2	-	-	-

Special Precautions Multi-modal shipping descriptions are provided for informational purposes and do not consider container size. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained

on all of the risks deriving from the substances and on all actions in case of emergency situations.

15. REGULATORY INFORMATION

State regulations

U.S. state Right-to-Know regulations

Chemical name	CAS-No	Massachusetts - RTK	New Jersey - RTK	Pennsylvania - RTK
Iron	7439-89-6	-	-	-
Titanium dioxide	13463-67-7	X	X	X
Silica Flint	60676-86-0	X	X	-
Potassium Silicate	1312-76-1	-	-	-
Feldspar	68476-25-5	-	X	X
Manganese	7439-96-5	X	X	X
Kaolinite, Hydrous Aluminum Silicate	1332-58-7	X	X	X
Cellulose	9004-34-6	X	X	X
Iron Oxide	1309-38-2	-	-	X

California Prop. 65

Chemical name	CAS-No	California Prop. 65
Iron	7439-89-6	-
Titanium dioxide	13463-67-7	Carcinogen
Silica Flint	60676-86-0	-
Potassium Silicate	1312-76-1	-
Feldspar	68476-25-5	-
Manganese	7439-96-5	-
Kaolinite, Hydrous Aluminum Silicate	1332-58-7	-
Cellulose	9004-34-6	Carcinogen
Iron Oxide	1309-38-2	-

California Proposition 65

This product contains chemicals known to the state of California to cause cancer:

U.S. Federal Regulations

Methylene Chloride notification No Information Available

US EPA SARA 313

Chemical name	CAS-No	CERCLA/SARA Hazardous Substances RQ	SARA 313 - Threshold Values
Iron	7439-89-6	-	-
Titanium dioxide	13463-67-7	-	-
Silica Flint	60676-86-0	-	-
Potassium Silicate	1312-76-1	-	-
Feldspar	68476-25-5	-	1.0 %
Manganese	7439-96-5	-	1.0 %
Kaolinite, Hydrous Aluminum Silicate	1332-58-7	-	-
Cellulose	9004-34-6	-	-
Iron Oxide	1309-38-2	-	-

US EPA SARA 311/312
hazardous categorization Not available

Chemical name	DSL/NDSL	Inventory - United States - Section 8(b) Inventory (TSCA)	U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification
Iron	X	X	-
Titanium dioxide	X	X	-
Silica Flint	X	X	-
Potassium Silicate	X	X	-
Feldspar	X	X	-
Manganese	X	X	-
Kaolinite, Hydrous Aluminum Silicate	X	X	-
Cellulose	X	X	-
Iron Oxide	X	X	-

Legend X - Listed

16. OTHER INFORMATION

NFPA

Health Not available
Flammability Not available
Instability Not available

HMIS

Health Not available
Flammability Not available
Physical hazards Not available

Notice: 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 are not required on SDSs 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 mark of the National Paint & Coatings Association (NPCA).

Prepared by Regulatory Affairs

Issue date 01-Jun-2018

Revision date 14-Jan-2020

Revision note

Key to abbreviations

- ACGIH (American Conference of Governmental Industrial Hygienists)
- ATE (Average Toxicity Estimate)
- DSL/NDSL (Domestic Substance List/Non-Domestic Substance List)
- HMIS (Hazardous Materials Identification System)
- IARC (International Agency for Research on Cancer)
- IATA (International Air Transport Association)
- IMDG/IMO (International Maritime Dangerous Goods/International Maritime Organization)
- NFPA (National Fire Protection Association)
- NTP (National Toxicology Program)
- OEL (Occupational Exposure Level)
- OSHA (Occupational Safety and Health Administration of the US Department of Labor)
- PEL (Permissible Exposure Limit)

TSCA (Toxic Substance Control Act)
USEPA (United States Environmental Protection Agency)

Disclaimer

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 information is current, applicable, and suitable to their circumstances.

End of Safety Data Sheet