

# SAFETY DATA SHEET

Issuing Date 25-Mar-2021

Revision date 25-Mar-2021

Revision Number 1

## 1. Identification

### Product identifier

Product Name Amalloy 606

### Other means of identification

Product Code(s) WF00347

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use Covered Electrode for Shielded Metal Arc Welding (SMAW)

### Restrictions on use

### Details of the supplier of the safety data sheet

#### Supplier Address

Amalloy Industries, 1405 Southview Ln, Albert Lea, MN 56007

### Emergency telephone number

Company Phone Number 507-373-1677

Emergency Telephone Chemtrec 1-800-424-9300

## 2. Hazard(s) identification

### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### Hazard statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

The product contains no substances which at their given concentration, are considered to be hazardous to health.

**Appearance** Coated electrode

**Physical state** Solid

**Odor** Odorless

### Other information

Harmful to aquatic life with long lasting effects

When this product is used in a welding process, the hazards are mostly from electric shock, heat, radiation, fumes and gases. Electric shock can kill. Arc rays, spatter, and melting metals can severely injure eyes and burn skin. Welding arc and sparks can cause fire

Fumes and gases can be dangerous to your health. Certain medical studies have suggested that nervous system and/or lung damage can result from overexposure to welding fumes and gases

The welding fumes and gases produced from welding rod, coating flux, and base metal in a welding process may contain manganese and manganese compounds, nickel and nickel compounds, chromium (VI) and chromium compound, carbon dioxide, carbon monoxide, nitrogen dioxide, and ozone.

Overexposure to manganese and its compounds may cause metal fume fever and affect the central nervous system. Prolonged inhalation of nickel and chromium (VI) compounds above safe exposure limits can cause cancer

**Unknown acute toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Powdered Cellulose fine	9004-34-6	3-7	*
Titanium dioxide	13463-67-7	1-5	*
Manganese	7439-96-5	1-5	*
Diiron trioxide	1309-37-1	0.5-1.5	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First-aid measures

#### Description of first aid measures

**Inhalation** Remove to fresh air.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

#### Most important symptoms and effects, both acute and delayed

#### Symptoms

#### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

### 5. Fire-fighting measures

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls/personal protection

### Control parameters

#### Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Powdered Cellulose fine 9004-34-6	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) STEL: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 5000 mg/m <sup>3</sup> TWA: 2.4 mg/m <sup>3</sup> CIB 63 fine TWA: 0.3 mg/m <sup>3</sup> CIB 63 ultrafine, including engineered nanoscale
Manganese 7439-96-5	TWA: 0.02 mg/m <sup>3</sup> respirable particulate matter TWA: 0.1 mg/m <sup>3</sup> inhalable particulate matter	(vacated) TWA: 1 mg/m <sup>3</sup> fume (vacated) STEL: 3 mg/m <sup>3</sup> fume (vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> fume	IDLH: 500 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> fume STEL: 3 mg/m <sup>3</sup>
Diiron trioxide	TWA: 5 mg/m <sup>3</sup> respirable	TWA: 10 mg/m <sup>3</sup> fume	IDLH: 2500 mg/m <sup>3</sup> Fe dust and

1309-37-1	particulate matter	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> fume and total dust Iron oxide (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction regulated under Rouge	fume TWA: 5 mg/m <sup>3</sup> Fe dust and fume
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**Appropriate engineering controls**

<b>Engineering controls</b>	Showers Eyewash stations Ventilation systems.
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**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	No special protective equipment required.
<b>Skin and body protection</b>	No special protective equipment required.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

<b>Physical state</b>	Solid
<b>Appearance</b>	Coated electrode
<b>Color</b>	brown
<b>Odor</b>	Odorless
<b>Odor threshold</b>	

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

**Other information**

**Explosive properties**  
**Oxidizing properties**

VOC Content (%) No data available

## 10. Stability and reactivity

### Reactivity

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid** None known based on information supplied.

**Incompatible materials** None known based on information supplied.

**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available.

### Symptoms related to the physical, chemical and toxicological characteristics

#### Symptoms

#### Acute toxicity

#### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 18,349.10 mg/kg  
**ATEmix (dermal)** 28,723.80 mg/kg  
**ATEmix (inhalation-dust/mist)** 96.7633 mg/l

**Unknown acute toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity  
 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Product Information

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Powdered Cellulose fine 9004-34-6	> 5 g/kg ( Rat )	> 2 g/kg ( Rabbit ) > 2000 mg/kg ( Rabbit )	> 5800 mg/m <sup>3</sup> ( Rat ) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg ( Rat )	-	-
Manganese 7439-96-5	= 9 g/kg ( Rat )	-	-

Diiron trioxide 1309-37-1	> 10000 mg/kg ( Rat )	-	-
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation**

Product Information

**Serious eye damage/eye irritation**

Product Information

**Respiratory or skin sensitization**

Product Information

**Germ cell mutagenicity**

Product Information

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Powdered Cellulose fine 9004-34-6	-	Group 1	Known	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X
Diiron trioxide 1309-37-1	-	Group 3	-	-

**Legend**

**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP (National Toxicology Program)**

Known - Known Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

**Reproductive toxicity**

Product Information

**STOT - single exposure**

Product Information

**STOT - repeated exposure**

Product Information

**Target organ effects**

kidney, Respiratory system, Eyes, Skin, Central nervous system, blood, Lungs.

**Aspiration hazard**

**Other adverse effects**

**Interactive effects**

**12. Ecological information**

**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Product Information

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Manganese 7439-96-5	-	LC50: >3.6mg/L (96h, Oncorhynchus mykiss)	-	-
Diiron trioxide 1309-37-1	-	LC50: =100000mg/L (96h, Danio rerio)	-	-

**Persistence and degradability**

**Bioaccumulation** There is no data for this product.

**Other adverse effects****13. Disposal considerations****Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Manganese 7439-96-5	Ignitable powder

**14. Transport information**

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

**15. Regulatory information****International Inventories**

**TSCA** Contact supplier for inventory compliance status.

**DSL/NDL** Contact supplier for inventory compliance status.

**EINECS/ELINCS** Contact supplier for inventory compliance status.

<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AICS</b>	Contact supplier for inventory compliance status.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Powdered Cellulose fine - 9004-34-6	Carcinogen
Titanium dioxide - 13463-67-7	Carcinogen
Nickel - 7440-02-0	Carcinogen
QUARTZ - 14808-60-7	Carcinogen

**U.S. State Right-to-Know Regulations****US State Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Powdered Cellulose fine 9004-34-6	X	X	X
Water 7732-18-5	-	-	X
Titanium dioxide 13463-67-7	X	X	X



Manganese 7439-96-5	X	X	X
Diiron trioxide 1309-37-1	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. Other information**

<b>NFPA</b>	Health hazards 1	Flammability 0	Instability 0	Physical and chemical properties -
<b>HMIS</b>	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

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**Revision Note****Disclaimer**

The information provided in this 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.

**End of Safety Data Sheet**