

-----FIRE AND EXPLOSION HAZARD DATA -----

Not Applicable

-----REACTIVITY DATA -----

Stability:

Stable

Incompatibilities (Materials to avoid):

Acids

Hazardous Decomposition Products:

Fumes and/or gases produced from welding or burning operations.

Polymerization:

Will not occur.

-----HEALTH HAZARD DATA -----

Health Effects/Signs and Symptoms:

Exposure to the constituents of these products will only occur during activities such as welding or burning. However, because of the low toxicity of the components and/or the low air levels anticipated during such activities, these products are not considered to be hazardous chemicals as defined by the federal OSHA Hazard Communication Standard.

However, for additional information, users may wish to consult the American National Standard on "Safety in Welding and Cutting" (ANSI 249.1 - 1983) which is published by the American Welding Society.

Usual Route(s) of Entry:

Inhalation

Medical Conditions Possibly Aggravated:

Chronic diseases or disorders of the respiratory system.

Carcinogen Information:

Not considered to be a carcinogen.

-----FIRST AID AND MEDICAL EMERGENCY PROCEDURES -----

Eye Contact:

Not anticipated to pose a significant eye hazard.

Skin Contact:

Not anticipated to pose a significant skin hazard.

Inhalation:

Remove from excessive exposure levels unless proper respiratory protection is worn.

Ingestion:

Not considered an ingestion hazard.

-----OCCUPATIONAL EXPOSURE CONTROL MEASURES -----

Engineering Controls (Ventilation, etc.):

Ventilation should be sufficient to maintain exposure levels below the applicable exposure limit.

Work Practices (Handling and Storage, etc):

Arc or spark generated when welding or burning on these products could be a source of ignition for combustible or flammable materials.

Eye Protection:

Not anticipated to pose a significant eye hazard.

Skin Protection:

Not anticipated to pose a significant skin hazard.

Respiratory Protection:

When engineering controls are not sufficient to lower exposure levels below the applicable exposure limit, use a NIOSH-approved respirator for dusts and metal fumes within the use limits of the respirator.

=====SPILL, LEAK, AND DISPOSAL INFORMATION=====

Procedures to Follow if Material is Released or Spilled:

NA

Waste Disposal Method(s):

Any excess product can be recycled for further use or disposed by methods which are in accordance with local, state, and federal regulations.

=====ADDITIONAL OR MISCELLANEOUS INFORMATION=====

Maintaining air levels of iron oxide fume and dusts below its TLV should be sufficient to control for airborne concentrations of other constituents.

Nonmetallic coatings may be applied (often at the customer's request) to the surface of steel products. These are usually classified as protective coatings or lubricants. The typical nonmetallic coatings are as follows:

<u>Steel Product Form</u>	<u>Possible Coatings Applied</u>
Bars:	rust preventive oils
Sheet Products:	rust preventive oils, chromate treatment
Rope:	epoxy coatings, lacquer
Rod Products:	lubricants - zinc phosphate, calcium oxide (lime), sodium meta silicate, sodium stearate
Wire Products:	rust preventive oils; lubricants - oils, borax soaps, molybdenum disulfide
Reinforcing Bars:	epoxy coatings, paints
Structural:	paints

The possible presence of these coatings on steel products should be recognized and considered when evaluating potential employee health hazards and exposures during welding or other dust/fume generating activities.

Footnotes:

- (1) Concentrations may vary somewhat between batches or lots. Where possible, a concentration range is indicated. Occasionally, how-

ever, levels may even fall outside of the usual concentration ranges.

- (2) Common names, if applicable, appear in parentheses following the chemical names.
- (3) All values, unless otherwise specified, refer to 8-hour time-weighted average concentrations and units are in mg/M^3 .
- (4) As iron oxide fume.
- (5) Ceiling value.
- (6) As manganese fume.

Abbreviations:

- NA = Not Applicable
 - NE = Not Established
 - UK = Unknown (No applicable information was found).
 - GT = Greater Than
 - LT = Less Than
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