

MATERIAL SAFETY DATA SHEET

REV: 05/18/05

U.S. OSHA HAZARD COMMUNICATION STANDARD,
29 CFR 1910.1200/ILL TSDA Pa 38-20

DULUTH BRASS

MANUFACTURING

SECTION 1

EMERGENCY TELEPHONE NO.
(312) 226-6600

2301 COMMONWEALTH AVENUE / DULUTH, MN 55808-1643

218-626-2564 / FAX 218-626-2615

CHEMICAL NAME and SYNONYMS

Aluminum Bronze (86-3.5-10.5)

TRADE NAME and SYNONYMS

Aluminum Bronze 9C

CHEMICAL FAMILY

N/A

FORMULA

ASTM C95400

SECTION II - HAZARDOUS INGREDIENTS

ELEMENT	CAS NUMBER	PERCENTAGE	PEL	TLV
			OSHA 8-HR TWA MG/M3	ACGIH 8-HR TWA MG/M3
Copper	7440-50-8	83.00 Min	0.1 (Fume)	0.1 (Fume)
Iron	1309-37-1	3.00 - 5.00	10 (Oxide Fume)	5 (Fume)
Aluminum	7429-90-5	10.00 - 11.50	5 (Fume)	5 (Fume)
Nickel	7440-02-0	1.50 Max	1	1

** This material is inert and non-toxic in the solid state **

SECTION III - PHYSICAL DATA

BOILING POINT (F°)

SPECIFIC GRAVITY (H₂O=1)

7.45

Copper	4703
Iron	5430
Aluminum	4442
Nickel	4950

Molten state operating temperature is 2000 to 2350 F

APPEARANCE & ODOR: Odorless yellow/golden metal

SECTION IV - FIRE and EXPLOSION HAZARD DATA

FLASH POINT (Method used)	N/A	FLAMMABLE LIMITS (%V)	LEI N/A	USI N/A
EXTINGUISHING MEDIA	Dry chemicals or sand should be used with molten metals.			
SPECIAL FIRE FIGHTING PROCEDURES	Fire Fighters should wear full protective clothing.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	DO NOT USE WATER ON MOLTEN METALS.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

SEE SECTION II

EFFECTS OF OVEREXPOSURE

SEE ATTACHMENT ITEMS 8, 9, 1, 13

EMERGENCY AND FIRST AID PROCEDURES

SEE ATTACHMENT ITEMS 8, 9, 1, 13

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	N/A
INCOMPATIBILITY (MATERIALS TO AVOID)			
STRONG OXIDIZERS			
HAZARDOUS DECOMPOSITION PRODUCTS			
N/A			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	N/A

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Special care should be taken when handling molten metal. Always wear proper safety equipment.

Accumulations of dust should be vacuumed or wet-swept to prevent airborne exposure.

WASTE DISPOSAL METHOD

Metal turnings, chips, risers, grindings, etc. are recycled. If not recycled, dispose of material in accordance with the requirements of 40 CFR subtitle C and other applicable federal, state, and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)

NIOSH Certified (3M 9920, etc.)

VENTILATION	LOCAL EXHAUST	X	SPECIAL
	MECHANICAL (GENERAL)		OTHER
PROTECTIVE GLOVES	Industrial Type	EYE PROTECTION	
		Safety Glasses/Goggles/Shields	
OTHER PROTECTIVE EQUIPMENT			
Compliance with OSHA Regulations and other accepted safety and hygiene practices.			

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Material in storage can become wet from condensation. It must be thoroughly dried before adding to molten metal. See other sections, references and sources.