

HOBART TAFE TECHNOLOGIES, INC. -- TAFE 1342 TUNGSTEN CARBIDE 12 COBALT --  
3439-01-397-4199

===== Product Identification =====

Product ID:TAFE 1342 TUNGSTEN CARBIDE 12 COBALT

MSDS Date:07/15/1994

FSC:3439

NIIN:01-397-4199

MSDS Number: BYCGN

=== Responsible Party ===

Company Name:HOBART TAFE TECHNOLOGIES, INC.

Address:146 PEMBROKE ROAD

City:CONCORD

State:NH

ZIP:03301

Country:US

Info Phone Num:603-22

4-9585

Emergency Phone Num:603-224-9585

CAGE:FO895

=== Contractor Identification ===

Company Name:HOBART TAFE TECHNOLOGIES INC

Address:146 PEMBROKE RD

City:CONCORD

State:NH

ZIP:03301-5000

Country:US

Phone:603-224-9585

CAGE:FO895

Company Name:STARGHILL TECHNOLOGIES CORP

Address:3850 OAKMAN BLVD

Box:City:DETROIT

State:MI

ZIP:48204-1119

Country:US

Phone:313-933-4141

CAGE:0VYG8

Company Name:TAFE INC

Address:146 PEMBROKE RD

Box:City:CONCORD

State:NH

ZIP:03301

Country:US

Phone:603-224-9585

CAGE:26057

=====  
Composition/Information on Ingredients  
=====

Ingred Name:TUNGSTEN  
CAS:7440-33-7  
RTECS #:YO7175000  
Fraction by Wt: 82% %  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:5 MG/M3/ 10 STEL  
ACGIH TLV:5 MG/M3/10 STEL;9192

Ingred Name:COBALT (SARA III)  
CAS:7440-48-4  
RTECS #:GF8750000  
Fraction by Wt: 12% %  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:0.05 MG/M3  
ACGIH TLV:0.05 MG/M3;DUST 9192

Ingred Name:IRON  
CAS:7439-89-6  
RTECS #:NO4565500  
Fraction by Wt: 2% %  
Other REC Limits:NONE  
RECOMMENDED

Ingred Name:CARBON BLACK  
CAS:1333-86-4  
RTECS #:FF5800000  
Fraction by Wt: 4% %  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:3.5 MG/M3  
ACGIH TLV:3.5 MG/M3; 9192

=====  
Hazards Identification  
=====

LD50 LC50 Mixture:NOT GIVEN FOR PRODUCT AS A WHOLE  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:YES OSHA:NO  
Health Hazards Acute and Chronic:SHORT TERM EXPOSURE TO POWDER AND  
SPRAY ARC FUMES MAY RESUL

T IN IRRITATION OF THE NOSE, THROAT, EYES AND SKIN. CHRONIC OVEREXPOSURE TO POWDER AND SPRAY ARC FUMES MAY RESULT IN BRONCHIAL ASTHMA, LUNG FIBROSIS OR PNEUMOCONIOSIS. ELECTRIC SHOCK CAN KILL. ARC RAYS MAY INJURE EYES AND BURN SKIN. NO HAZARD DURING STORAGE.

Explanation of Carcinogenicity:CONTAINS COBALT COMPOUNDS CONSIDERED AS CARCINOGENS PER MANUFACTURER.

Effects of Overexposure:RESPIRATORY TRACT IRRITATION, TIGHTENING OF CHEST, PRODUCTIVE COUGH, SKIN IRRITATION, DERMA

TITIS, WEIGHT LOSS, EYE IRRITATION, REDUCED PULMONARY FUNCTION, DIFFUSE NODULAR FIBROSIS OF LUNGS, SIDEROSIS.

Medical Cond Aggravated by Exposure:IMPAIRED LUNG FUNCTION (ASTHMA-LIKE CONDITIONS).

===== First Aid Measures =====

First Aid:INHALATION: IF PULMONARY SYMPTOMS DEVELOP, REMOVE FROM EXPOSURE AND SEEK MEDICAL ATTENTION. SKIN: WASH THOROUGHLY WITH SOAP AND WATER. IF IRRITATION DEVELOPS, SEEK MEDICAL ATTENTION. EYES: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 10 MINUTES. IF IRRITATION DEVELOPS, SEEK MEDICAL ATTENTION. INGESTION: DRINK LARGE AMOUNTS OF WATER AND INDUCE VOMITING. GET MEDICAL ATTENTION.

===== Fire Fighting Measures =====

Flash Point:NONFLAMMABLE

Lower Limits:NOT GIVEN

Upper Limits:NOT GIVEN

Extinguishing Media:COVER BURNING POWDER WITH DRY SAND OR LIMESTONE TO SMOTHER FLAME.

Fire Fighting Procedures:FIRE FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING

APPARATUS AND FULL PROTECTIVE GEAR. IF FIRE OCCURS IN OPEN DRUMS, SEAL DRUM WITH LID TO SMOTHER FLAMES.

Unusual Fire/Explosion Hazard:DUST MAY PRESENT FIRE OR EXPLOSION HAZARD IN CONFINED AREA. THIS IS NOT EXPECTED UNDER NORMAL HANDLING PROCEDURES.

===== Accidental Release Measures =====

Spill Release Procedures:REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA OF SPILL. USE CLEANUP METHODS WHICH AVOID DUST GENERATION SUCH AS VACUUMING WITH APPROPR

IATE FILTERS. IF DUST IS GENERATED, USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR.  
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====

Handling and Storage Precautions:STORE IN COOL, DRY PLACE. MAINTAIN GOOD HOUSEKEEPING PROCEDURES TO PREVENT ACCUMULATION OF DUST. USE CLEANUP METHODS WHICH MINIMIZE DUST GENERATION.

Other Precautions:KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT SHAKE CLOTHING TO REMOVE DUST. AVOID INHALATION AND SKIN CONTACT.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IF PERSONAL EXPOSURE CANNOT BE CONTROLLED BELOW THE APPLICABLE LIMITS, WEAR A PROPERLY FITTED FUME/DUST RESPIRATOR APPROVED BY NIOSH/MSHA FOR PROTECTION AGAINST INGREDIENTS. REFER TO OSHA STANDARD 191 0.134, ON RESPIRATORY PROTECTION.

Ventilation:USE ENOUGH VENTILATION TO KEEP DUSTS, FUMES AND GASES BELOW THE PELS AND TLVS IN WORKER'S BREATHING ZONE.

Protective Gloves:WHEN WELDING, USE WELDER'S GLOVES  
Eye Protection:USE NO.3 OR NO. 5 SHADE SAFETY GLASSES  
Other Protective Equipment:RESISTANT CLOTHING AS NECESSARY TO PREVENT SKIN CONTACT. AN EMERGENCY EYEWASH AND SHOWER SHOULD BE AVAILABLE.

Work Hygienic Practices:WASH HANDS THOROUGHLY WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES.

Supplemental Safety and Health  
PRODUCT NOT A HAZARD AS SHIPPED/STORED. HAZARD OCCURS WHEN USED IN WELDING. ARC SPRAY FUMES AND GASES CANNOT BE CLASSIFIED SIMPLY. THE COMPOSITION AND QUANTITY ARE DEPENDENT UPON THE METAL BEING SPRAYED.

===== Physical/Chemical Properties =====

HCC:N1  
Boiling Pt:B.P. Text:NOT GIVEN  
Melt/Freeze Pt:M.P/F.P Text:>1,300C  
Vapor Pres:NOT GIVEN  
Vapor Density:NOT GIVEN  
Spec Gravity:NOT GIVEN  
Evaporation Rate & Reference:NOT GIVEN  
Solubility in Water:INSOLUBLE  
Appearance and Odor:GREY POWDER, NO ODOR  
Percent Volatiles by Volume:NIL

=====

Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

ACIDS. CONTACT WITH ACIDS WILL PRODUCE FLAMMABLE HYDROGEN GAS.

Stability Condition to Avoid: AVOID CREATING DUST. FINE POWDER MAY  
IGNITE DURING MECHANICAL TREATMENT.

Hazardous Decomposition Products: CARBON MONOXIDE, CARBON DIOXIDE,  
OXIDES OF NITROGEN, OZONE, TUNGSTEN OXIDES, COBALT OXIDES, IRON  
OXIDE, CARBIDE

===== Disposal Considerations =====

Waste Disposal

Methods: PREVENT WASTE FROM CONTAMINATING SURROUNDING  
ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL CONTAINER OR  
LINER IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.  
PRODUCT MAY BE RECLAIMED OR RECYCLED THROUGH METAL RECYCLER.

=====

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department  
of Defense. The United S

tates of America in no manner whatsoever,

expressly or implied, warrants this information to be accurate and  
disclaims all liability for its use. Any person utilizing this  
document should seek competent professional advice to verify and  
assume responsibility for the suitability of this information to their  
particular situation.