Ver 1.1	sion	Revision Date: 02/18/2022		0S Number: 0000261482	Date of last issue: 08/24/2020 Date of first issue: 08/24/2020			
SEC	CTION 1	. IDENTIFICATION						
	Produc	t name	:	MasterFlow 647 PART A				
	Produc	t code	:	0000000005168	0924 00000000051680924			
	Other r	neans of identification	:	MFlow 647 PTA				
		acturer or supplier's on any name of supplier	deta :		Construction Systems			
	Addres	S	:	23700 CHAGRIN Beachwood OH 4				
	Emerge	ency telephone	:	ChemTel: +1-813	-248-0585			
		al Emergency Tele- Number	:	USA: +1-800-255	5-3924 ChemTel contract no. MIS9240420			
	Recom	mended use of the c	hen	nical and restriction	ons on use			
	Recom	mended use	:	Injection or grouti	ng applications			
	Restric	tions on use	:	Reserved for indu	strial and professional use.			

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin irritation	: Category 2
Eye irritation	: Category 2A
Skin sensitization	: Category 1
Short-term (acute) aquatic hazard	: Category 2
Long-term (chronic) aquatic hazard	: Category 2
GHS label elements Hazard pictograms	
Signal Word	: Warning

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Hazaı	rd Statements	H315 Causes s H317 May caus H401 Toxic to a	e an allergic skin reaction.
Preca	utionary Statements	P264 Wash skir P272 Contamin the workplace. P273 Avoid rele	athing mist or vapors. n thoroughly after handling. lated work clothing must not be allowed out of ease to the environment. tective gloves/ eye protection/ face protection.
		Response: P302 + P352 IF P305 + P351 + for several minu to do. Continue P333 + P313 If attention. P337 + P313 If tion.	ON SKIN: Wash with plenty of soap and water P338 IF IN EYES: Rinse cautiously with water utes. Remove contact lenses, if present and eas rinsing. skin irritation or rash occurs: Get medical advic eye irritation persists: Get medical advice/ atter contaminated clothing and wash before reuse.
		Disposal: P501 Dispose o posal plant.	of contents/ container to an approved waste dis-
	hazards known.		

Substance / Mixture : Mixture

Chemical nature : Epoxy resin solution

Components

Chemical name	CAS-No.	Concentration (% w/w)
Reaction product: bisphenol-A-	25068-38-6	>= 90 - <= 100
(epichlorhydrin)-Epoxy resin (number average molecular weight <= 700)		
1,3-bis(2,3-epoxypropoxy)-2,2-	17557-23-2	>= 5 - < 10
dimethylpropane		
Titanium dioxide	13463-67-7	>= 0.1 - < 1
Actual concentration is withheld as a t	rade secret	

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice

: Remove contaminated clothing.

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lf inł	If inhaled		Keep patient calm, remove to fresh air, seek medical atten- tion.				
In ca	In case of skin contact		Wash thoroughly with soap and water Get medical attention if irritation develops and persists.				
In ca	In case of eye contact		Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.				
lf sw	If swallowed		Immediately rinse mouth and then drink 200-300 ml of wate seek medical attention.				
	t important symptoms effects, both acute and yed	:	Causes serious e Causes skin irrita May cause an alle				
Note	es to physician	:	Treat symptomati	cally.			

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam Water spray Dry powder Carbon dioxide (CO2)
Unsuitable extinguishing media	:	water jet
Hazardous combustion prod- ucts	:	harmful vapours nitrogen oxides fumes/smoke carbon black carbon oxides
Further information	:	The degree of risk is governed by the burning substance and the fire conditions. If exposed to fire, keep containers cool by spraying with water. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Contaminated extinguishing water must be disposed of in accordance with official regulations.
Special protective equipment for fire-fighters	:	Wear a self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : Do not breathe vapour/aerosol/spray mists.

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	tive equipment and emer- gency procedures			Wear eye/face protection. If exposed to high vapour concentration, leave area imme ately. Use personal protective clothing. Handle in accordance with good building materials hygier and safety practice.			
	Enviror	nmental precautions	:		ated water/firefighting water. into drains/surface waters/groundwater.		
	Methods and materials for containment and cleaning up		:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.			
SEC	CTION 7	. HANDLING AND ST	OR	AGE			
	Advice on protection against fire and explosion		:	Normal measures	for preventive fire protection.		
	Advice	on safe handling	:	Avoid aerosol form Avoid inhalation of Avoid skin contact Avoid contact with	of mists/vapours. t.		
	Conditi	ons for safe storage	:	place. Containers which kept upright to pre	ions / working materials must comply with		
		r information on stor- nditions	:		priginal container in a cool, dry, well- way from ignition sources, heat or flame. et sunlight.		
	Recom peratur	mended storage tem- e	:	> 39 °F / > 4 °C			

Further information on storage stability : PROTECT FROM FREEZING DURING THE COLD-SEASON (BELOW 40°F / 5°C).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA	10 mg/m3	ACGIH

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L					(Titanium dioxide)
	Engin	eering measures	:	Ensure adequa	te ventilation.
	Perso	nal protective equip	ment		
	Respi	ratory protection	:	tional exposure respirators.	are facing concentrations above the occupa- limits they must use appropriate certified proved respiratory protection.
	Hand	protection			
	Re	marks	:		resistant protective gloves. Manufacturer's se should be observed because of great di-
	Eye p	rotection	:	Tightly fitting sa	afety goggles (chemical goggles).
	Skin a	nd body protection	:	Body protection and exposure.	n must be chosen based on level of activity
	Protec	tive measures	:	Avoid contact v Avoid exposure Handle in acco and safety prace	ases/vapours/aerosols. vith the skin, eyes and clothing. e - obtain special instructions before use. rdance with good building materials hygiene stice. sed work clothing is recommended.
	Hygie	ne measures	:	Hands and/or f the end of the s At the end of th care agents ap Remove contai re-use or dispo Gloves must be	e shift the skin should be cleaned and skin-

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Color	: white
Odor	: organic, mild
Odor Threshold	: not determined
рН	: Not applicable
Melting point	: No data available

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Bo	iling point		Not applicable	
20				
Fla	sh point	:	> 200 °F / > 93 °	C
Ev	aporation rate	:	No data available	
Fla	mmability (liquids)	:	Not classified as	a flammability hazard
	per explosion limit / Upper mmability limit	:	Not applicable	
	wer explosion limit / Lower mmability limit	:	Not applicable	
Va	por pressure	:	No data available	9
Re	lative vapor density	:	No data available	9
Re	lative density	:	No data available	9
De	nsity	:	approx. 9.6 lb/US	Sg (68 °F / 20 °C)
Bu	lk density	:	Not applicable	
	lubility(ies) Water solubility	:	insoluble	
	Solubility in other solvents	:	No data available	9
	rtition coefficient: n- anol/water	:	not applicable for	r mixtures
Au	toignition temperature	:	No data available	9
De	composition temperature	:	No decompositio scribed/indicated	n if stored and handled as pre-
Vis	cosity Viscosity, dynamic		No data available	
	Viscosity, kinematic	:	No data available	
Ex	plosive properties	:	Not explosive	
Ox	idizing properties	:	Based on its stru as oxidizing.	ctural properties the product is not classified
Su	blimation point	:	No data available	
Мс	lecular weight	:	Not applicable	

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SECTI	SECTION 10. STABILITY AND REACTIVITY								
R	Reactivity		No hazardous reactions if stored and handled as pre- scribed/indicated.						
CI	Chemical stability		The product is stable if stored and handled as pre- scribed/indicated.						
	Possibility of hazardous reac- tions		The product is stable if stored and handled as pre- scribed/indicated.						
C	Conditions to avoid		See SDS section 7 - Handling and storage.						
In	Incompatible materials		Strong acids Strong bases Strong oxidizing agents Strong reducing agents						
Hazardous decomposition products			No hazardous de as prescribed/inc	ecomposition products if stored and handled licated.					
SECTI	ON 11. TOXICOLOGICAL I	NFC	RMATION						

SECTION 11. TOXICOLOGICAL INFORMATIC

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.			
IARC	Group 2B: Possibly carcinogenic to humans		
Titanium dioxide			

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

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STOT	-repeated exposure			
Not cl	assified based on availa	ble	information.	
-	ation toxicity			
	assified based on availa	ble	information.	
Furth	er information			
<u>Product:</u> Remarks		:	Health injuries are not known or expected under normal use. The product has not been tested. The statements on toxicolo gy have been derived from the properties of the individual components.	
ECTION	12. ECOLOGICAL INFO	DRI	IATION	
Ecoto	oxicity			
Produ	uct:			
	exicology Assessment	:	Toxic to aquatic li	fe.
	Chronic aquatic toxicity		Toxic to aquatic life with long lasting effects.	
Chror	lic aquatic toxicity			le with long lasting enects.
Persi	stence and degradabili	ity		e with long lasting enects.
Persi No da Bioac	stence and degradabili	ity		e with long lasting eneots.
Persi No da Bioad No da Mobil	stence and degradabili ata available ccumulative potential	ity		e with long lasting enects.
Persi No da Bioad No da Mobil No da	stence and degradabili ata available ccumulative potential ata available lity in soil	ity		

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues	:	Dispose of in accordance with national, state and local regula- tions.
		Do not contaminate ponds, waterways or ditches with chemi- cal or used container.
		Do not discharge into drains/surface waters/groundwater.
Contaminated packaging	:	Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the sub-

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		stance/product				
SECTI	SECTION 14. TRANSPORT INFORMATION					
In	International Regulations					
-	UNRTDG Not regulated as a dangerous good					
	IATA-DGR Not regulated as a dangerous good					
	IMDG-Code Not regulated as a dangerous good					
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied.						
D	Domestic regulation					
	49 CFR Not regulated as a dangerous good					
-	Special precautions for user Not applicable					

SECTION 15. REGULATORY INFORMATION

US State Regulations

Pennsylvania Right To Know

xylene
ethylbenzene
isobutyl alcohol

1330-20-7 100-41-4 78-83-1

California Prop. 65

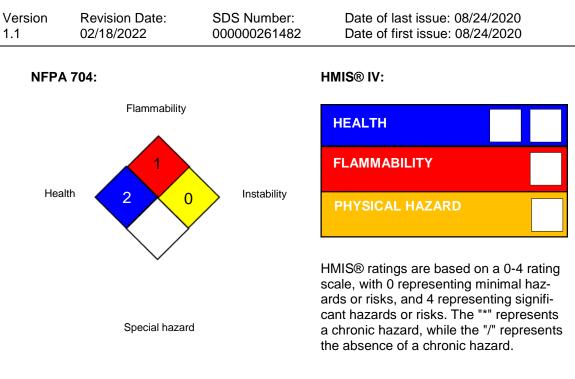
WARNING: This product can expose you to chemicals including Titanium dioxide, which is/are known to the State of California to cause cancer, and

toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:			
TSCA	:	All substances listed as active on the TSCA inventory	
DSL	:	All components of this product are on the Canadian DSL	

SECTION 16. OTHER INFORMATION

Further information



Full text of other abbreviations

 A. ACGIH Threshold Limit Values (TLV) A. OSHA - TABLE Z-1 Limits for Air Contaminants - 0.1000
A. Occupational Exposure Limits (OSHA) - Table Z-1 Lim- or Air Contaminants
our, time-weighted average our time weighted average our time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI -Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substanc-

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es; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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