

MATERIAL SAFETY DATA SHEET

FILE NO.: 3465

MSDS DATE: Feb.23, 2012

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODES: Flex Seal (3465)

MANUFACTURER: Atco International

ADDRESS: 1401 Barclay Circle, S.E.
Marietta, GA 30060

EMERGENCY PHONE: 800-255-3924

OTHER CALLS: 770-424-7550

CHEMICAL NAME: SILICONE ELASTOMER

NFPA PROFILE: HEALTH 2

FLAMMABILITY 1

INSTABILITY/REACTIVITY 0

PREPARED BY: Allen Buckalew, Technical Services

DATE: 03-23-2012

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS NO.</u>	<u>Hazardous</u>	<u>% WT</u>	<u>INGREDIENT</u>
4253-34-3	Yes	1.0 – 5.0	METHYLTRIACTOXYLSILANE
556-67-2	Yes	1.0 – 5.0	OCTAMETHYLCYCLOTETRASILOXANE
68554-67-6	No	5.0 – 10.0	Siloxanes & Silicones, Dimethylpolymers w/Methylsilsesquioxanes
68611-44-9	No	10.0 – 30.0	Treated Filler
70131-67-8	No	60.0 – 100.0	Dimethylpolysiloxane

THE ABOVE COMPONENTS ARE HAZARDOUS AS DEFINED IN 29 CFR 1910.1200

SECTION 3: HAZARDS IDENTIFICATION

ROUTES OF ENTRY: EYE, SKIN, INHALATION, INGESTION

POTENTIAL HEALTH EFFECTS

ACUTE EFFECTS

EYES: DIRECT CONTACT WITH UNCURED PRODUCT MAY CAUSE MODERATE IRRITATION

SKIN: MAY CAUSE MODERATE IRRITATION

INGESTION: LOW INGESTION HAZARD IN NORMAL USE

INHALATION: IRRITATES RESPIRATORY PASSAGES VERY SLIGHTLY.

CARCINOGENICITY: THIS PRODUCT OR ONE OF ITS INGREDIENTS PRESENT AT 0.1% OR MORE IS NOT LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY NTP, IARC, OR OSHA

TARGET ORGANS: SUBCHRONIC (TARGET ORGAN): LIVER; REPRODUCTIVE HAZARD.

PROLONGED/CHRONIC EXPOSURE EFFECTS

SKIN: NO KNOWN APPLICABLE INFORMATION

INHALATION: NO KNOWN APPLICABLE INFORMATION

INGESTION: NO KNOWN APPLICABLE INFORMATION

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NO KNOWN APPLICABLE INFORMATION

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data, and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

SECTION 4: FIRST AID MEASURES

EYES: IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION

SKIN: REMOVE FROM SKIN AND WASH THOROUGHLY WITH SOAP AND WATER OR WATERLESS CLEANER. GET MEDICAL ATTENTION IF IRRITATION OR OTHER ILL EFFECTS DEVELOP OR PERSIST.

INGESTION: NO FIRST AID SHOULD BE NEEDED.

MATERIAL SAFETY DATA SHEET

FILE NO.: 3465

MSDS DATE: Feb.23, 2012

INHALATION: NO FIRST AID SHOULD BE NEEDED.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: TREAT ACCORDING TO PERSON'S CONDITION AND SPECIFICS OF EXPOSURE.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: NOT DETERMINED

FLASH POINT:

F: > 212°

C: >100°

METHOD USED: CLOSED CUP

AUTOIGNITION TEMPERATURE: NOT DETERMINED

EXTINGUISHING MEDIA: ON LARGE FIRES USE DRY CHEMICAL, FOAM, OR WATER SPRAY. ON SMALL FIRES USE CARBON DIOXIDE (CO₂), DRY CHEMICAL OR WATER SPRAY. WATER CAN BE USED TO COOL FIRE EXPOSED CONTAINERS.

SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING LARGE FIRES INVOLVING CHEMICALS. DETERMINE THE NEED TO EVACUATE OR ISOLATE THE AREA ACCORDING TO YOUR LOCAL EMERGENCY PLAN. USE WATER SPRAY TO KEEP FIRE EXPOSED CONTAINERS COOL.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Carbon dioxide and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

OBSERVE ALL PERSONAL PROTECTION EQUIPMENT RECOMMENDATIONS DESCRIBED IN SECTION 5 AND 8. WIPE UP OR SCRAPE UP AND CONTAIN FOR SALVAGE OR DISPOSAL. CLEAN AREA AS APPROPRIATE SINCE SPILLED MATERIALS, EVEN IN SMALL QUANTITIES, MAY PRESENT A SLIP HAZARD. FINAL CLEANING MAY REQUIRE USE OF STEAM, SOLVENTS, OR DETERGENTS. DISPOSE OF SATURATED ABSORBANT OR CLEANING MATERIALS APPROPRIATELY, SINCE SPONTANEOUS HEATING MAY OCCUR. LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS MAY APPLY TO RELEASES AND DISPOSAL OF THIS MATERIAL AS WELL AS THOSE MATERIALS AND ITEMS EMPLOYED IN THE CLEANUP OF RELEASES. YOU WILL NEED TO DETERMINE WHICH FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS ARE APPLICABLE. SECTIONS 13 AND 15 OF THIS MSDS PROVIDE INFORMATION REGARDING CERTAIN FEDERAL AND STATE REQUIREMENTS.

SECTION 6 NOTES: SEE SECTION 8 FOR PERSONAL PROTECTIVE EQUIPMENT FOR SPILLS.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: USE WITH ADEQUATE VENTILATION. PRODUCT EVOLVES ACETIC ACID (HOAc) WHEN EXPOSED TO WATER OR HUMID AIR. PROVIDE VENTILATION DURING USE TO CONTROL HOAc WITHIN EXPOSURE GUIDELINES OR USE RESPIRATORY PROTECTION. AVOID EYE CONTACT. AVOID SKIN CONTACT.

OTHER PRECAUTIONS: USE REASONABLE CARE AND STORE AWAY FROM OXIDIZING MATERIALS. KEEP CONTAINERS CLOSED AND STORE AWAY FROM WATER OR MOISTURE.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

GENERAL VENTILATION : RECOMMENDED

RESPIRATORY PROTECTION: NOT NEEDED UNDER AMBIENT CONDITIONS.

EYE PROTECTION: USE PROPER PROTECTION- SAFETY GLASSES AS A MINIMUM. FOR SPILLS, FULL FACE RESPIRATOR.

SKIN PROTECTION: WASH AT MEALTIME AND END OF SHIFT. CONTAMINATED CLOTHING AND SHOES SHOULD BE REMOVED AS SOON AS PRACTICAL AND THOROUGHLY CLEANED BEFORE REUSE.

CHEMICAL PROTECTIVE GLOVES RECOMMENDED: BUTYL RUBBER. NEOPRENE RUBBER®. NITRILE RUBBER.

MATERIAL SAFETY DATA SHEET

FILE NO.: 3465

MSDS DATE: Feb.23, 2012

WORK HYGIENIC PRACTICES: AVOID EYE CONTACT. AVOID SKIN CONTACT. USE REASONABLE CARE.

EXPOSURE GUIDELINES:

<u>CAS NUMBER</u>	<u>COMPONENT NAME</u>	<u>EXPOSURE LIMITS</u>
4253-34-3	METHYLTRIACETOXYLSILANE	SEE ACETIC ACID COMMENTS
17689-77-9	ETHYLTRIACETOXYLSILANE	SEE ACETIC ACID COMMENTS

ACETIC ACID IS FORMED UPON CONTACT WITH WATER OR HUMID AIR. PROVIDE ADEQUATE VENTILATION TO CONTROL EXPOSURES WITHIN GUIDELINES OF OSHA PEL: TWA 10 ppm AND ACHIH TLV: TWA 10ppm, STEL 15 ppm.

WHEN HEATED TO TEMPERATURES ABOVE 150°C (300°F) IN THE PRESENCE OF AIR, PRODUCT MAY FORM FORMALDEHYDE VAPORS. PHYSICAL AND HEALTH HAZARD INFORMATION IS READILY AVAILABLE FROM HI-TEC INDUSTRIES AND THE MATERIAL SAFETY DATA SHEET.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	VINEGAR-LIKE (ACETIC ACID) SMELL
COLOR:	WHITE
PHYSICAL STATE:	PASTE
pH AS SUPPLIED:	NOT DETERMINED
SPECIFIC GRAVITY @25°C:	1.06
BOILING POINT:	> 100°C
MELTING POINT/FREEZING POINT:	NOT DETERMINED
VAPOR PRESSURE (mmHg):	(20 deg C) (MM HG): Unknown
VAPOR DENSITY:	(AIR=1): No data available
SOLUBILITY IN WATER:	(20 deg C): Unknown
VISCOSITY:	NOT DETERMINED
VOLATILE CONTENT:	(VOL): 0.25% (m)

The above information is not intended for use in preparing product specifications.

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE

INCOMPATIBILITY (MATERIAL TO AVOID):

OXIDIZING MATERIAL CAN CAUSE A REACTION. WATER, MOISTURE, OR HUMID AIR CAN CAUSE HAZARDOUS VAPORS TO FORM AS DESCRIBED IN SECTION 8.

HAZARDOUS POLYMERIZATION: HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

CONDITIONS TO AVOID (POLYMERIZATION): NONE

SECTION 11: TOXICOLOGICAL INFORMATION

Octamethylcyclotetrasiloxane:

Ingestion Effects:	Rodents given in large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) Developed increased liver weights relative to unexposed control animals due to hepatocellular Hyperplasia (increased number of liver cells which appear normal) as well as hypertrophy (increased cell size).
Inhalation Effects:	In inhalation studies, laboratory rodents exposed to octamethylcyclotetrasiloxane (300 ppm five days week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents. Range finding reproductive studies were conducted (whole body

MATERIAL SAFETY DATA SHEET

FILE NO.: 3465

MSDS DATE: Feb.23, 2012

inhalation, 70 days prior to mating, through mating, gestation and lactation) with octylmethylcyclotetrasiloxane (D4). Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found. Interim results from a two generation reproductive study in rats exposed to 500 and 700 ppm D4 (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended periods of off-spring delivery (dystocia). These results were not observed at the 70 and 300 ppm dosing levels. Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150, or 700 ppm D4 showed test-article related effects in the kidney (male and female) and uterus of rats exposed for 12 to 24 months. These effects include increased kidney weight and severity of chronic nephropathy, increased uterine weight, increased incidence of endometrial cell hyperplasia, and an increased incidence of endometrial adenomas. All of these effects are limited to the 700 ppm exposure group. These results have been shown to be rat-specific. Further studies are ongoing. In developmental toxicity studies, rats and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500 ppm respectively.

Teratogenicity: No teratogenic effects (birth defects) were observed in either study. Contains no dibutyltin compound(s) - May impair fertility. May cause harm to unborn child.

Other Toxicological Information: OTHER EFFECTS OF OVEREXPOSURE: Acetic acid released during curing., Contains octamethylcyclotetrasiloxane which may cause reproductive effects based on animal data.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION: Complete Information Not Available

ENVIRONMENTAL EFFECTS: Complete Information is Not Yet Available

FATE AND EFFECTS IN WASTE WATER TREATMENT PLANTS: Complete Information is Not Yet Available

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	<1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <=2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment". ASTM STP 1179, p.34, 1993

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS (40 CFR 261)

SECTION 13 NOTES: When a decision is made to discard this material, as received, is it classified as a hazardous waste? NO

Check State and Local laws for additional regulatory requirements regarding disposal.

SECTION 14: TRANSPORT INFORMATION **DOT Road Shipment Information (49 CFR 172.101)**

Not subject to DOT
Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200

TSCA (TOXIC SUBSTANCE CONTROL ACT): All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

Section 304 CERCLA Hazardous Substances (40 CFR 302): None

MATERIAL SAFETY DATA SHEET

FILE NO.: 3465

MSDS DATE: Feb.23, 2012

EPA SARA TITLE III: Section 302 Extremely Hazardous Substances (40 CFR 355): None
311/312 HAZARD CLASS (40 CFR 370):

Acute:: Yes

Chronic: No

Fire: No

Pressure: No

Reactive: No

313 REPORTABLE INGREDIENTS: None present or none present in regulated quantities.

STATE REGULATIONS:

CALIFORNIA:

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproduction harm.

None Known.

MASSACHUSETTS:

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
7631-86-9	<=8.0	Silica, amorphous
1333-86-4	<=2.0	Carbon Black
13463-67-7	<=1.8	Titanium dioxide
1309-37-1	<=1.0	Iron Oxide

NEW JERSEY:

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
70131-67-8	<=64.0	Dimethyl siloxane, hydroxyl-terminated
64742-46-7	<=26.0	Hydrotreated middle petroleum distillates
7631-86-9	<=8.0	Silica, amorphous
63148-62-9	<=3.0	Polydimethylsiloxane
4253-34-3	<=2.0	Methyltriacetoxysilane
17689-77-9	<=2.0	Ethyltriacetoxysilane
1333-86-4	<=2.0	Carbon Black
1332-37-2	<=2.0	Iron Oxide
147-14-8	<=2.0	Tetrabenz-5, 10, 15, 20-diazaphorphyrinephthalocyanine (Pigment blue 15)
13463-67-7	<=1.8	Titanium dioxide

PENNSYLVANIA

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
70131-67-8	<=64.0	Dimethyl siloxane, hydroxyl-terminated
64742-46-7	<=26.0	Hydrotreated middle petroleum distillates
7631-86-9	<=8.0	Silica, amorphous
1333-86-4	<=2.0	Carbon Black
13463-67-7	<=1.8	Titanium dioxide
1332-37-2	<=2.0	Iron Oxide

SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION: Prepared by Atco International

DISCLAIMER:

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made.

The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.